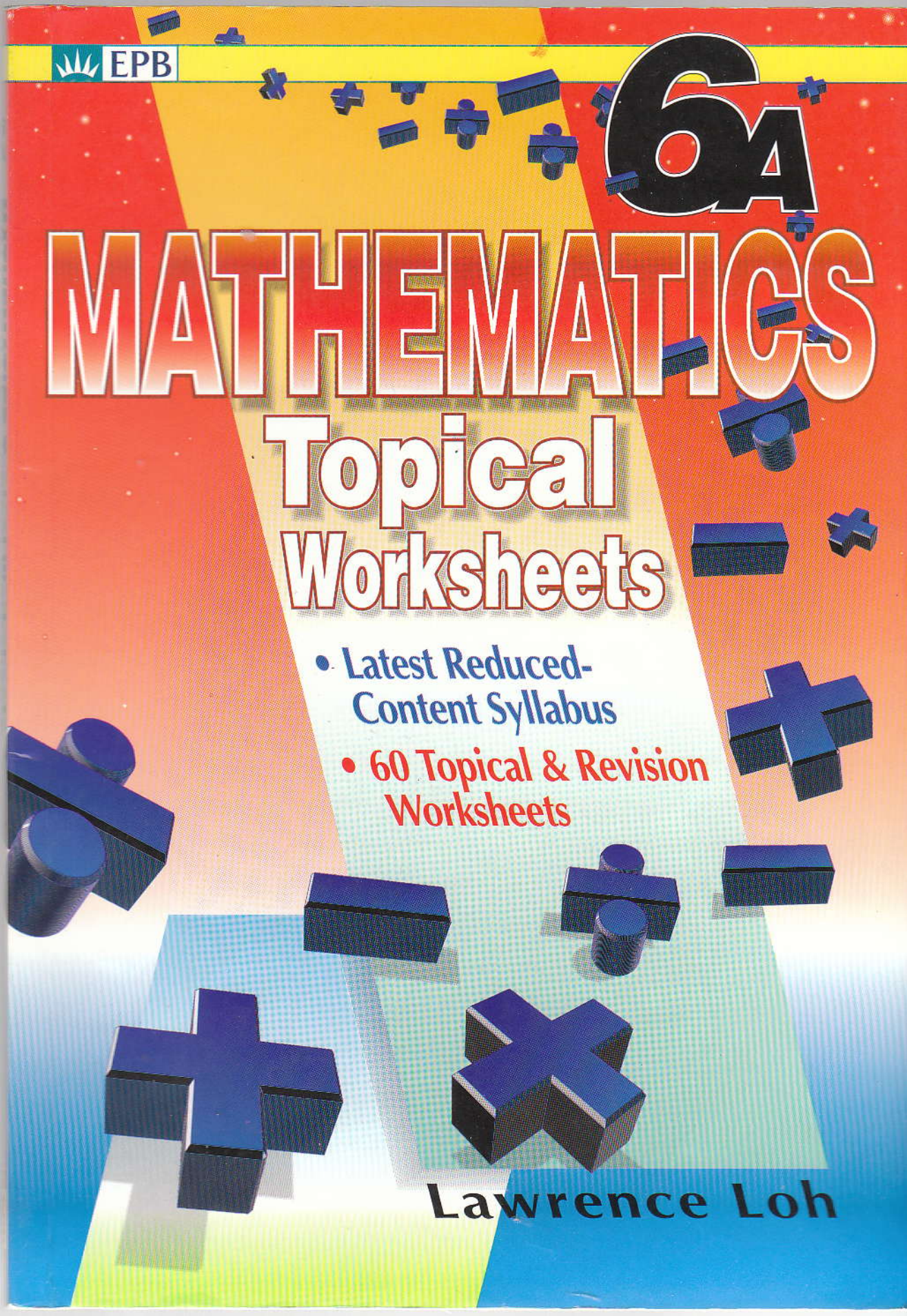

EPB
6A
MATHEMATICS
Topical Worksheets
• Latest Reduced-Content Syllabus
• 60 Topical & Revision Worksheets
Lawrence Loh

6A

MATHEMATICS

Topical Worksheets

NAME:_____

CLASS:_____

SCHOOL:_____

EPB

PREFACE

MATHEMATICS TOPICAL WORKSHEETS PRIMARY 6A is written based on the **latest** Primary School Mathematics **Reduced-Content** Syllabus, Primary 6A Mathematics Teacher's Guide and Primary 6A Mathematics textbook and workbooks.

This book comprises **60 Worksheets**, including **55 Topical Worksheets** and **5 Revision Worksheets**. All the worksheet exercises have been specially designed and arranged in the **order taught in schools**. They become **progressively more difficult and challenging** as the pupil acquires new skills in each unit. The language used in this book has also been kept simple and clear.

Instructional objectives are indicated at the beginning of each worksheet to highlight the aim of the exercises in each worksheet for easy reference by teachers.

This book provides the **essential practice** needed by Primary 6 pupils to excel in their school assessments. It is therefore **highly recommended** for all Primary 6 pupils.

CONTENTS

WORKSHEET 1

ALGEBRA (1)

Instructional Objectives

- To use letters to represent unknown numbers.
- To write simple algebraic expressions in one variable involving only addition.

Do these sums. (6 marks each)

1. Leslie has 16 clocks. Peter has a clocks.
   (a) Express their total number of clocks in terms of a.
   (b) If $a = 18$, find their total number of clocks.
   (c) If $a = 24$, find their total number of clocks.

2. Jackie bought b used stamps and 37 unused stamps.
   (a) Express the total number of stamps he bought in terms of b.
   (b) If $b = 15$, find the total number of stamps he bought.
   (c) If $b = 49$, find the total number of stamps he bought.

3. Alfred spent \$$c$ and had \$13 left.
   (a) Express the sum of money he had at first in terms of c.
   (b) If $c = 6$, find the sum of money he had at first.
   (c) If $c = 27$, find the sum of money he had at first.

4. Jeremy can carry 8 kg of weights. Paul can carry d kg of weights more than Jeremy.
   (a) Express the amount of weights Paul can carry in terms of d.
   (b) If $d = 3$, find the amount of weights Paul can carry.
   (c) If $d = 6$, find the amount of weights Paul can carry.

5. Andrew has \$$e$. He has \$9 less than John.
   (a) Express the amount of money John has in terms of e.
   (b) If $e = 14$, find the amount of money John has.
   (c) If $e = 52$, find the amount of money John has.

WORKSHEET 2

ALGEBRA (2)

Instructional Objectives

- To use letters to represent unknown numbers.
- To write simple algebraic expressions in one variable involving only subtraction.

Do these sums. (6 marks each)

1. Ann weighed 32 kg last year. She lost f kg this year.
   (a) Express Ann's new weight in terms of f.
   (b) If $f = 3$, find Ann's new weight.
   (c) If $f = 5$, find Ann's new weight.

2. Jamie bought 42 oranges and ate g oranges.
   (a) Express the number of oranges she had left in terms of g.
   (b) If $g = 4$, find the number of oranges she had left.
   (c) If $g = 8$, find the number of oranges she had left.

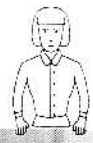
3. Lucy and Mary have h bookmarks altogether. Lucy has 22 bookmarks.
   (a) Express the number of bookmarks Mary has in terms of h.
   (b) If $h = 40$, find the number of bookmarks Mary has.
   (c) If $h = 70$, find the number of bookmarks Mary has.

4. Wendy has i watches. Kelly has 5 fewer watches than Wendy.
   (a) Express the number of watches Kelly has in terms of i.
   (b) If $i = 19$, find the number of watches Kelly has.
   (c) If $i = 33$, find the number of watches Kelly has.

5. Jennifer has 60 clips. She has j clips more than Lynn.
   (a) Express the number of clips Lynn has in terms of j.
   (b) If $j = 17$, find the number of clips Lynn has.
   (c) If $j = 41$, find the number of clips Lynn has.

WORKSHEET 3

ALGEBRA (3)



Instructional Objectives

- To use letters to represent unknown numbers.
- To write simple algebraic expressions in one variable involving only multiplication.

Do these sums. (6 marks each)

1. 4 boys have k kites each.
   (a) Express their total number of kites in terms of k.
   (b) If $k = 2$, find their total number of kites.
   (c) If $k = 7$, find their total number of kites.

2. There are 6 cages. There are m birds in each cage.
   (a) Express the total number of birds in terms of m.
   (b) If $m = 3$, find the total number of birds.
   (c) If $m = 5$, find the total number of birds.

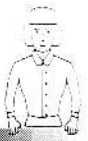
3. There are n packets. Each packet has 3 chocolate bars.
   (a) Express the total number of chocolate bars in terms of n.
   (b) If $n = 8$, find the total number of chocolate bars.
   (c) If $n = 13$, find the total number of chocolate bars.

4. A man bought 9 shirts at \$$p$ each.
   (a) Express the sum of money he spent in terms of p.
   (b) If $p = 5$, find the sum of money he spent.
   (c) If $p = 15$, find the sum of money he spent.

5. There are q bricks. Each brick weighs 3 kg.
   (a) Express the total weight of the bricks in terms of q.
   (b) If $q = 10$, find the total weight of the bricks.
   (c) If $q = 25$, find the total weight of the bricks.

WORKSHEET 4

ALGEBRA (4)



Instructional Objectives

- To use letters to represent unknown numbers.
- To write simple algebraic expressions in one variable involving only division.

Do these sums. (6 marks each)

1. 5 identical chairs weigh r kg altogether.
   (a) Express the weight of each chair in terms of r.
   (b) If $r = 15$, find the weight of each chair.
   (c) If $r = 35$, find the weight of each chair.

2. Mary bought 3 identical blouses for \$$s$.
   (a) Express the cost of each blouse in terms of s.
   (b) If $s = 12$, find the cost of each blouse.
   (c) If $s = 27$, find the cost of each blouse.

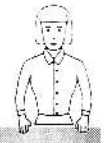
3. The total length of t pieces of ribbon is 30 m.
   (a) Express the average length of each piece of ribbon in terms of t.
   (b) If $t = 5$, find the average length of each piece of ribbon.
   (c) If $t = 10$, find the average length of each piece of ribbon.

4. u stickers are shared among 4 girls equally.
   (a) Express the number of stickers each girl gets in terms of u.
   (b) If $u = 20$, find the number of stickers each girl gets.
   (c) If $u = 64$, find the number of stickers each girl gets.

5. Sam solved v problems in 36 minutes.
   (a) Express the average length of time he took to solve each problem in terms of v.
   (b) If $v = 2$, find the average length of time he took to solve each problem.
   (c) If $v = 12$, find the average length of time he took to solve each problem.

WORKSHEET 5

ALGEBRA (5)



Instructional Objective

- To find the value of a simple algebraic expression in one variable by substitution.

Find the value of each of the following expressions when $w = 5$. (2 marks each)

1. $w + 7$ = _____
2. $8 + w$ = _____
3. $w + 11$ = _____
4. $16 + w$ = _____
5. $w + 25$ = _____
6. $30 + w$ = _____
7. $w + 37$ = _____
8. $49 + w$ = _____
9. $w + 44$ = _____
10. $63 + w$ = _____

Find the value of each of the following expressions when $x = 12$. (2 marks each)

11. $21 - x$ = _____
12. $x - 1$ = _____
13. $35 - x$ = _____
14. $x - 3$ = _____
15. $43 - x$ = _____
16. $x - 6$ = _____
17. $56 - x$ = _____
18. $x - 9$ = _____
19. $70 - x$ = _____
20. $x - 12$ = _____

Find the value of each of the following expressions when $y = 8$. (2 marks each)

21. $2y =$ _____

22. $5y =$ _____

23. $7y =$ _____

24. $14y =$ _____

25. $10y =$ _____

26. $8y =$ _____

27. $12y =$ _____

28. $18y =$ _____

29. $20y =$ _____

30. $100y =$ _____

Find the value of each of the following expressions when $z = 24$. (2 marks each)

31. $\frac{z}{2} =$ _____

32. $\frac{2}{z} =$ _____

33. $\frac{z}{3} =$ _____

34. $\frac{3}{z} =$ _____

35. $\frac{z}{4} =$ _____

36. $\frac{4}{z} =$ _____

37. $\frac{z}{6} =$ _____

38. $\frac{6}{z} =$ _____

39. $\frac{z}{12} =$ _____

40. $\frac{12}{z} =$ _____

WORKSHEET 6

ALGEBRA (6)

Instructional Objectives

- To use letters to represent unknown numbers.
- To write simple algebraic expressions in one variable involving addition and subtraction.

Do these sums. (6 marks each)

1. Henry had *a* stamps. He gave 3 stamps to his brother and 8 stamps to his sister.
   (a) Express the number of stamps Henry had left in terms of *a*.
   (b) If $a = 26$, find the number of stamps Henry had left.
   (c) If $a = 75$, find the number of stamps Henry had left.

2. A baker had *b* cakes. He sold 9 cakes and made another 6 cakes.
   (a) Express the number of cakes he had in the end in terms of *b*.
   (b) If $b = 32$, find the number of cakes he had in the end.
   (c) If $b = 45$, find the number of cakes he had in the end.

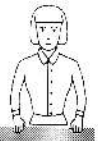
3. Jerry and Calvin have 90 marbles altogether. Jerry has c marbles. Calvin has more marbles than Jerry.
   (a) Express the number of marbles Calvin has more than Jerry in terms of c.
   (b) If $c = 16$, find the number of marbles Calvin has more than Jerry.
   (c) If $c = 25$, find the number of marbles Calvin has more than Jerry.

4. Edwin has \$$d$. Mark has \$2 less than Edwin.
   (a) Express their total sum of money in terms of d.
   (b) If $d = 30$, find their total sum of money.
   (c) If $d = 54$, find their total sum of money.

5. Don has e magazines. Daniel has e more magazines than Don. Jack has 15 fewer magazines than Daniel.
   (a) Express the number of magazines Jack has in terms of e.
   (b) If $e = 11$, find the number of magazines Jack has.
   (c) If $e = 18$, find the number of magazines Jack has.

WORKSHEET 7

ALGEBRA (7)



Instructional Objectives

- To use letters to represent unknown numbers.
- To write simple algebraic expressions in one variable involving addition and multiplication.

Do these sums. (6 marks each)

1. Vivian has 17 handkerchiefs. She buys another 4 packs of f handkerchiefs.
   (a) Express Vivian's total number of handkerchiefs in terms of f.
   (b) If $f = 5$, find Vivian's total number of handkerchiefs.
   (c) If $f = 8$, find Vivian's total number of handkerchiefs.

2. Alice bought 3 books at \$$g$ each and a magazine for \$12.
   (a) Express the total sum of money she spent in terms of g.
   (b) If $g = 9$, find the total sum of money she spent.
   (c) If $g = 15$, find the total sum of money she spent.

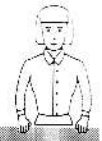
3. There are 7 shelves. Audrey puts h dolls on each shelf and the remaining 36 dolls in a drawer.
   (a) Express the total number of dolls Audrey has in terms of h.
   (b) If $h = 4$, find the total number of dolls Audrey has.
   (c) If $h = 6$, find the total number of dolls Audrey has.

4. Rachel has i calendars. Stella has thrice as many calendars as Rachel.
   (a) Express their total number of calendars in terms of i.
   (b) If $i = 7$, find their total number of calendars.
   (c) If $i = 12$, find their total number of calendars.

5. Sheila gave j pencils to each of her 6 cousins and had 58 pencils left.
   (a) Express the original number of pencils Sheila had in terms of j.
   (b) If $j = 10$, find the original number of pencils Sheila had.
   (c) If $j = 16$, find the original number of pencils Sheila had.

WORKSHEET 8

ALGEBRA (8)



Instructional Objectives

- To use letters to represent unknown numbers.
- To write simple algebraic expressions in one variable involving addition and division.

Do these sums. (6 marks each)

1. Lawrence has 8 cats and Mathew has k cats.
   (a) Express their average number of cats in terms of k.
   (b) If $k = 4$, find their average number of cats.
   (c) If $k = 10$, find their average number of cats.

2. Damien bought 5 identical shirts with a \$20 note and an \$$m$ note.
   (a) Express the cost of each shirt in terms of m.
   (b) If $m = 20$, find the cost of each shirt.
   (c) If $m = 50$, find the cost of each shirt.

3. Billy's father and mother gave him \$11 and \$$n$ respectively. Billy spent the money in 6 days.
   (a) Express the average sum of money he spent each day in terms of n.
   (b) If $n = 13$, find the average sum of money he spent each day.
   (c) If $n = 25$, find the average sum of money he spent each day.

4. John has p marbles. Peter has half as many marbles as John.
   (a) Express their total number of marbles in terms of p.
   (b) If $p = 42$, find their total number of marbles.
   (c) If $p = 64$, find their total number of marbles.

5. Mike collected q stamps. He collected four times as many stamps as Rudy.
   (a) Express their total number of stamps in terms of q.
   (b) If $q = 40$, find their total number of stamps.
   (c) If $q = 60$, find their total number of stamps.

WORKSHEET 9

ALGEBRA (9)

Instructional Objectives

- To use letters to represent unknown numbers.
- To write simple algebraic expressions in one variable involving subtraction and multiplication.

Do these sums. (6 marks each)

1. There were 8 rows of r chairs. A cleaner removed 9 of the chairs.
   (a) Express the number of chairs left in terms of r.
   (b) If $r = 12$, find the number of chairs left.
   (c) If $r = 18$, find the number of chairs left.

2. Judy had \$30. She bought 2 files at \$$s$ each.
   (a) Express the amount of money she had left in terms of s.
   (b) If $s = 3$, find the amount of money she had left.
   (c) If $s = 5$, find the amount of money she had left.

3. Janice bought 5 dozen eggs and cooked t eggs.
   (a) Express the number of eggs she had left in terms of t.
   (b) If $t = 6$, find the number of eggs she had left.
   (c) If $t = 15$, find the number of eggs she had left.

4. Susan has u notebooks. Irene has thrice as many notebooks as Susan. Linda has 5 fewer notebooks than Irene.
   (a) Express the number of notebooks Linda has in terms of u.
   (b) If $u = 4$, find the number of notebooks Linda has.
   (c) If $u = 9$, find the number of notebooks Linda has.

5. Helen has v beanie toys. Carol has v times as many beanie toys as Helen and v more beanie toys than Dolly.
   (a) Express the number of beanie toys Dolly has in terms of v.
   (b) If $v = 5$, find the number of beanie toys Dolly has.
   (c) If $v = 10$, find the number of beanie toys Dolly has.

WORKSHEET 10

ALGEBRA (10)

Instructional Objectives

- To use letters to represent unknown numbers.
- To write simple algebraic expressions in one variable involving subtraction and division.

Do these sums. (6 marks each)

1. Alfred bought 3 identical tins of paint. He gave the cashier \$100 and received \$$w$ change.
   (a) Express the cost of each tin of paint in terms of w.
   (b) If $w = 10$, find the cost of each tin of paint.
   (c) If $w = 28$, find the cost of each tin of paint.

2. A man poured x kg of rice into 4 sacks equally. He then removed 5 kg of rice from the first sack.
   (a) Express the final weight of rice in the first sack in terms of x.
   (b) If $x = 48$, find the final weight of rice in the first sack.
   (c) If $x = 80$, find the final weight of rice in the first sack.

3. Ally made 80 pies. y pies were burnt and she threw them away. She divided the remaining pies into 6 boxes equally.
   (a) Express the number of pies in each box in terms of y.
   (b) If $y = 8$, find the number of pies in each box.
   (c) If $y = 14$, find the number of pies in each box.

4. Diana has z music CDs. She has five times as many music CDs as Ashley.
   (a) Express the number of music CDs Diana has more than Ashley in terms of z.
   (b) If $z = 15$, find the number of music CDs Diana has more than Ashley.
   (c) If $z = 25$, find the number of music CDs Diana has more than Ashley.

5. Jane has 30 beads. She has a times as many beads as Ivy.
   (a) Express the number of beads Ivy has fewer than Jane in terms of a.
   (b) If $a = 2$, find the number of beads Ivy has fewer than Jane.
   (c) If $a = 10$, find the number of beads Ivy has fewer than Jane.

WORKSHEET 11

ALGEBRA (11)

Instructional Objectives

- To use letters to represent unknown numbers.
- To write simple algebraic expressions in one variable involving multiplication and division.

Do these sums. (6 marks each)

1. 3 drawers had b towels each. Alan rearranged them into 5 drawers equally.
   (a) Express the number of towels in each of the 5 drawers in terms of b.
   (b) If $b = 15$, find the number of towels in each of the 5 drawers.
   (c) If $b = 45$, find the number of towels in each of the 5 drawers.

2. Jason bought 4 packs of 14 stamps each and put them equally onto c pages in his stamp album.
   (a) Express the number of stamps he put on each page in terms of c.
   (b) If $c = 2$, find the number of stamps he put on each page.
   (c) If $c = 7$, find the number of stamps he put on each page.

3. Shawn cuts a roll of ribbon d cm long into 8 equal pieces.
   (a) Express the total length of 3 pieces of ribbon in terms of d.
   (b) If $d = 64$, find the total length of 3 pieces of ribbon.
   (c) If $d = 96$, find the total length of 3 pieces of ribbon.

4. Ray has e balloons. Sam has thrice as many balloons as Ray and twice as many balloons as Jack.
   (a) Express the number of balloons Jack has in terms of e.
   (b) If $e = 6$, find the number of balloons Jack has.
   (c) If $e = 22$, find the number of balloons Jack has.

5. Kevin has 24 key chains. Edwin has half as many key chains as Kevin. Paul has f times as many key chains as Edwin.
   (a) Express the number of key chains Paul has in terms of f.
   (b) If $f = 3$, find the number of key chains Paul has.
   (c) If $f = 5$, find the number of key chains Paul has.

WORKSHEET 12

ALGEBRA (12)

Instructional Objective

- To find the value of a simple algebraic expression in one variable by substitution.

Find the value of each of the following expressions when $g = 6$. (2 marks each)

1. $2g + 6$ = _____
2. $8 + 5g$ = _____
3. $7g - 9$ = _____
4. $50 - 4g$ = _____
5. $8g + 11$ = _____
6. $19 - 3g$ = _____
7. $\frac{5g}{3}$ = _____
8. $\frac{9g}{2}$ = _____
9. $\frac{7g}{6}$ = _____
10. $\frac{10g}{3}$ = _____

Find the value of each of the following expressions when $h = 4$. (2 marks each)

11. $\frac{4 + h}{2}$ = _____
12. $\frac{6 + h}{5}$ = _____
13. $\frac{12 - h}{4}$ = _____
14. $\frac{h - 1}{3}$ = _____
15. $9 + \frac{3h}{4}$ = _____
16. $\frac{5h}{2} + 5$ = _____
17. $20 - \frac{7h}{2}$ = _____
18. $\frac{9h}{4} - 3$ = _____
19. $11 + \frac{11h}{4}$ = _____
20. $\frac{15h}{2} - 10$ = _____

Find the value of each of the following expressions when $k = 12$. (2 marks each)

21. $\frac{k}{3} + k$ = _____

22. $k + \frac{k}{2}$ = _____

23. $k - \frac{k}{4}$ = _____

24. $k - \frac{k}{6}$ = _____

25. $2k + \frac{k}{12}$ = _____

26. $\frac{k}{2} + 3k$ = _____

27. $7k - \frac{k}{2}$ = _____

28. $\frac{8k}{3} - k$ = _____

29. $5k + \frac{2k}{3}$ = _____

30. $6k - \frac{5k}{2}$ = _____

Find the value of each of the following expressions when $m = 3$. (2 marks each)

31. $m^2 + 5$ = _____

32. $14 + m^3$ = _____

33. $m^3 - 19$ = _____

34. $16 - m^2$ = _____

35. $4m^2 + 3$ = _____

36. $5m^2 - 7$ = _____

37. $8 + 3m^3$ = _____

38. $100 - 2m^3$ = _____

39. $\frac{4m^2}{3}$ = _____

40. $\frac{5m^3}{9}$ = _____

WORKSHEET 13

ALGEBRA (13)

Instructional Objective

- To simplify algebraic expressions in one variable involving addition and subtraction.

Simplify each of the following expressions. (2 marks each)

1. $a + 2a$ = _____
2. $b + b + b$ = _____
3. $3c + c$ = _____
4. $2d + 6d$ = _____
5. $7e + 2e$ = _____
6. $5f + 4f$ = _____
7. $g - g$ = _____
8. $4h - h$ = _____
9. $9i - 2i$ = _____
10. $8j - 3j$ = _____
11. $7k - 5k$ = _____
12. $10m - 4m$ = _____
13. $6n + 3n + n$ = _____
14. $4p + 2p + 2p$ = _____
15. $8q + q + 5q$ = _____
16. $r + 7r + 9r$ = _____
17. $7s - 2s - s$ = _____
18. $9t - t - t$ = _____
19. $10u - 4u - 5u$ = _____
20. $12v - 6v - 3v$ = _____
21. $5w + 4w - 6w$ = _____
22. $3x - 2x + x$ = _____
23. $9y - 7y + 8y$ = _____
24. $4z + 8z - 10z$ = _____

Simplify each of the following expressions. (2 marks each)

25. $5a + 3a + 4$ = _____
26. $6b + 2 + 4$ = _____

27. $3 + c + 2c$ = _____

28. $7 + 7d + 1$ = _____

29. $9 + 4e + 6$ = _____

30. $2f + 5 + 8f$ = _____

31. $6g + 3 - 2g$ = _____

32. $4 + 9h - 4h$ = _____

33. $8i - 5i - 3$ = _____

34. $9j + 6 - 5j$ = _____

35. $5 + 10k - 4k$ = _____

36. $11m - 7m - 1$ = _____

37. $2 + 6n - n$ = _____

38. $9p + 4 - 3p$ = _____

39. $2q + 3 + 6 + q$ = _____

40. $4 + 5r + 2 + 8r$ = _____

41. $5 + 7s + 3s + 4$ = _____

42. $3t + 7 + 9t + 8$ = _____

43. $10u + 7u + 6 + 6$ = _____

44. $3 + 9 + 2v + 4v$ = _____

45. $6w + 5 - 2w - 3$ = _____

46. $4x + 10 - 4 - x$ = _____

47. $9 + 5y - 6 - 4y$ = _____

48. $8 + 10z - 8z - 1$ = _____

49. $15a + 12 - 5 - 2a$ = _____

50. $20b + 6 - 9b - 5$ = _____

WORKSHEET 14

REVISION (1)

Instructional Objective

- To revise the topic *Algebra*.

Find the value of each of the following expressions when $x = 8$. (2 marks each)

1. $3x$ = _____

2. $\frac{x}{4}$ = _____

3. $5x + 5$ = _____

4. $21 - 2x$ = _____

5. $\frac{7 + x}{3}$ = _____

6. $\frac{7x}{2} - 10$ = _____

7. $x + \frac{x}{2}$ = _____

8. $4x - \frac{7x}{8}$ = _____

9. $2x^2 - 14$ = _____

10. $\frac{3x^3}{16}$ = _____

Simplify each of the following expressions. (2 marks each)

11. $3a + 6a$ = _____

12. $7b - 4b$ = _____

13. $5c + c + 2c$ = _____

14. $10d - 3d - 7d$ = _____

15. $8e - 6e + 9e$ = _____

16. $4f + 5 + 2f$ = _____

17. $6g + 6 - g$ = _____

18. $9h + 4 - 3 - 5h$ = _____

19. $i + 8 + 12i - 2$ = _____

20. $16 + 14j - 5 - 9j$ = _____

Do these sums. (6 marks each)

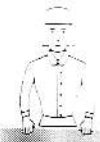
21. Howard had \$37. He bought 4 magazine racks at \$$x$ each.
    (a) Express the amount of money he had left in terms of x.
    (b) If $x = 4$, find the amount of money he had left.
    (c) If $x = 7$, find the amount of money he had left.

22. Joyce bought y bananas. She ate 3 bananas and divided the rest among her 3 sisters equally.
    (a) Express the number of bananas each sister received in terms of y.
    (b) If $y = 9$, find the number of bananas each sister received.
    (c) If $y = 15$, find the number of bananas each sister received.

23. Roland has z stamps. Peter has z times as many stamps as Roland. Ix has z times as many stamps as Peter.
    (a) Express the total number of stamps the three boys have in terms of z.
    (b) If $z = 5$, find the total number of stamps the three boys have.
    (c) If $z = 9$, find the total number of stamps the three boys have.

WORKSHEET 15

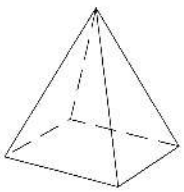
SOLID FIGURES
DRAWING SOLID FIGURES

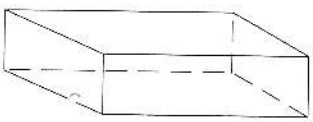


Instructional Objectives

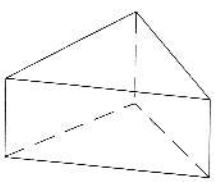
- To associate 2-D drawings with 3-D models or solids.
- To visualise prisms, pyramids and cylinders from drawings.

Match each figure to the correct solid. (2 marks each)

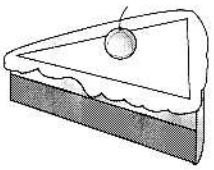
1. 

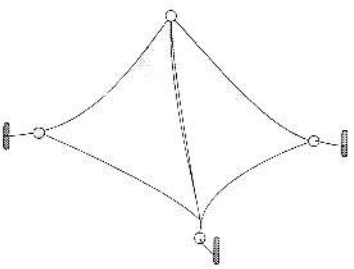
2. 

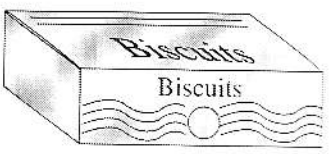
3. 

4. 

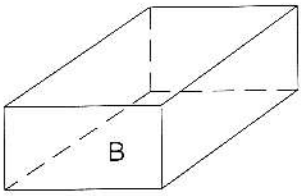
a. 

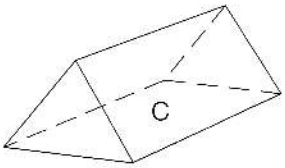
b. 

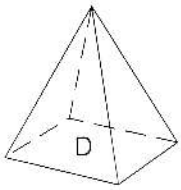
c. 

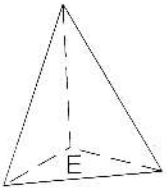
d. 

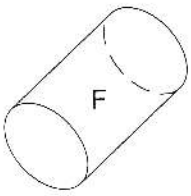
Fill in the correct answers. (2 marks each)











	Solid	Number of flat faces	Number of curved faces	Total number of faces
5.	A			
6.	B			
7.	C			
8.	D			
9.	E			
10.	F			

WORKSHEET 16

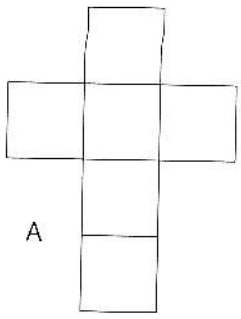
SOLID FIGURES
NETS (1)

Instructional Objective

- To identify nets of cubes and cuboids.

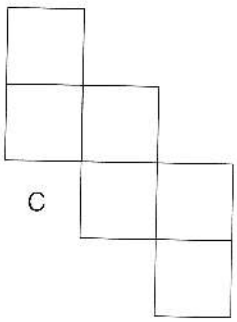
Circle the correct answers. (2 marks each)

1. Which of the following can be folded to form a cube?

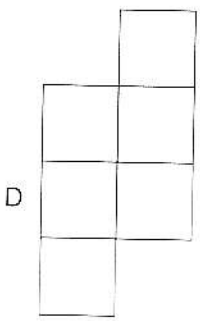


A

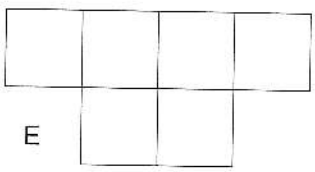
B



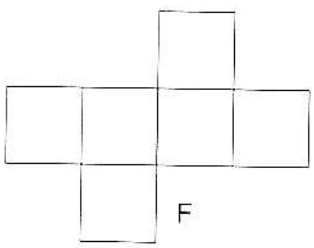
C



D

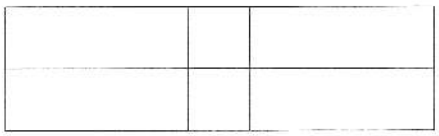


E

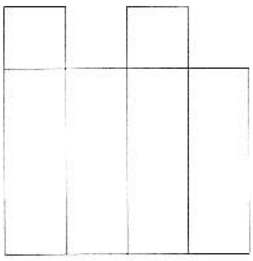


F

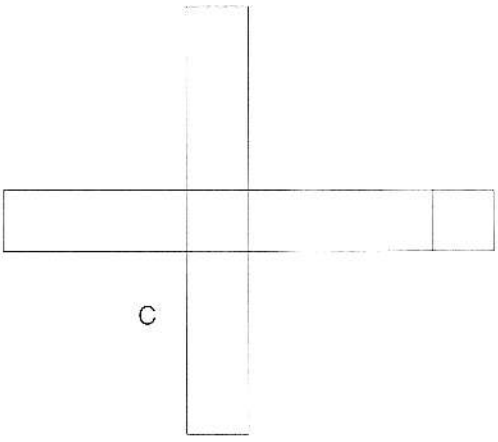
2. Which of the following can be folded to form a cuboid?



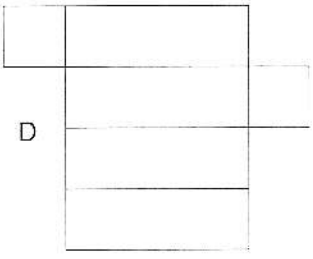
A



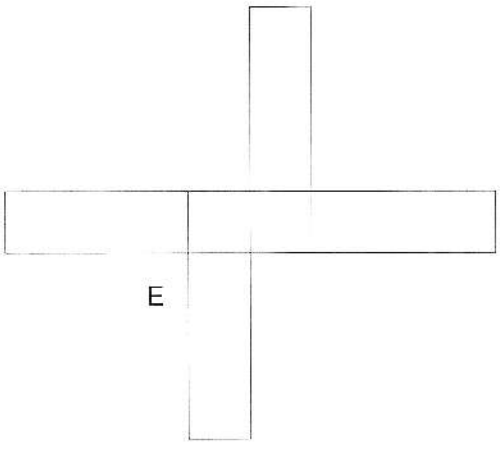
B



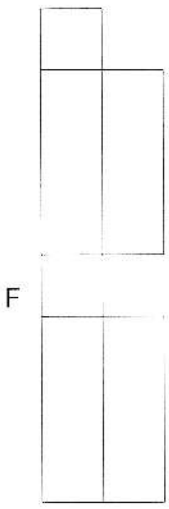
C



D



E



F

WORKSHEET 17

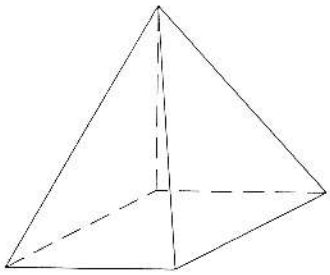
SOLID FIGURES
NETS (2)

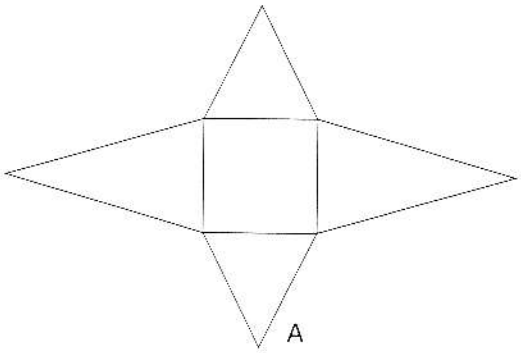
Instructional Objective

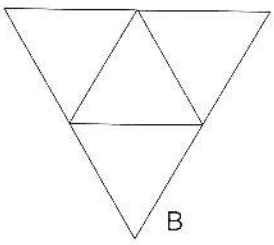
- To identify nets of prisms and pyramids.

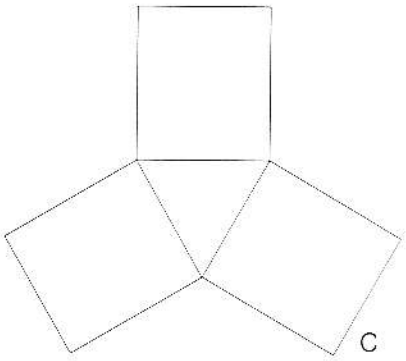
Circle the correct answers. (2 marks each)

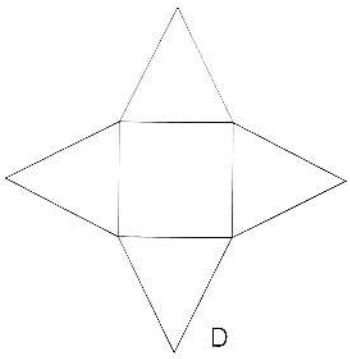
1. The figure below shows a solid. Which of the following can be a net of the solid?



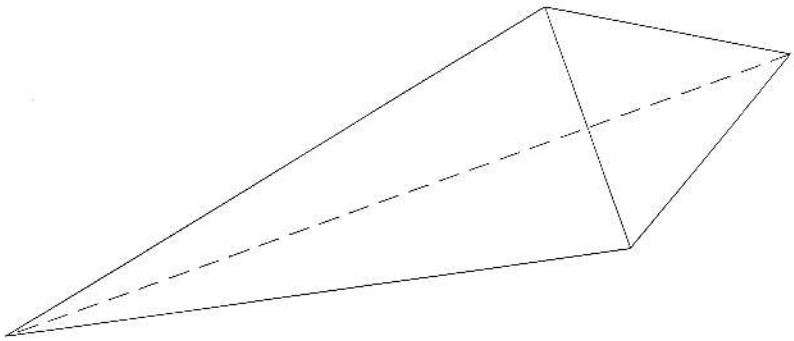


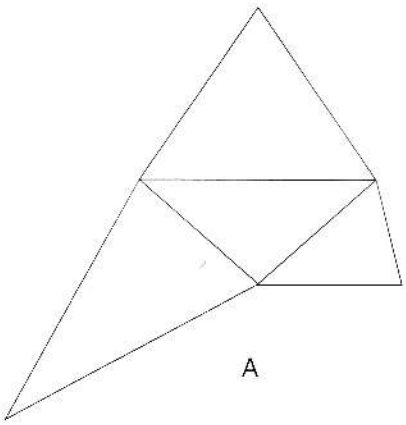




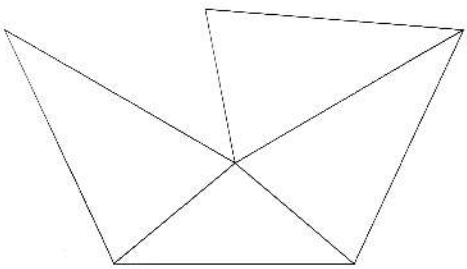


2. The figure below shows a solid. Which of the following can be a net of the solid?

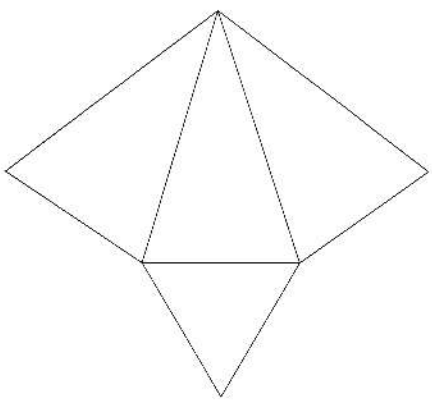




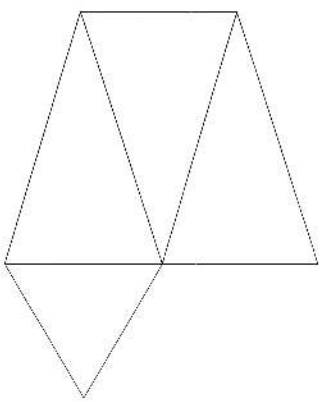
A



B



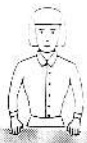
C



D

WORKSHEET 18

SOLID FIGURES
NETS (3)

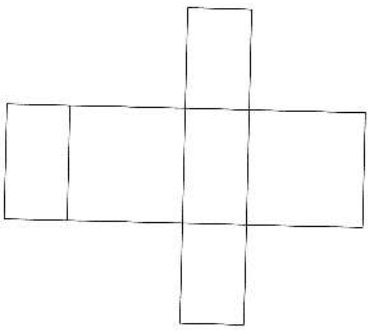


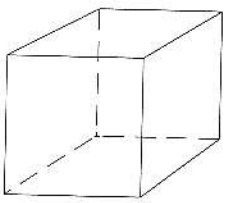
Instructional Objective

- To identify the solid which can be formed by a net.

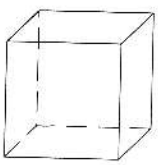
Circle the correct answers. (2 marks each)

1. The figure below shows a net of a solid. Which of the following can be the solid?

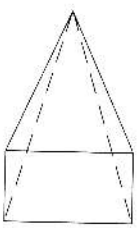




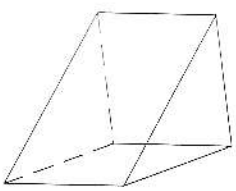
A



B

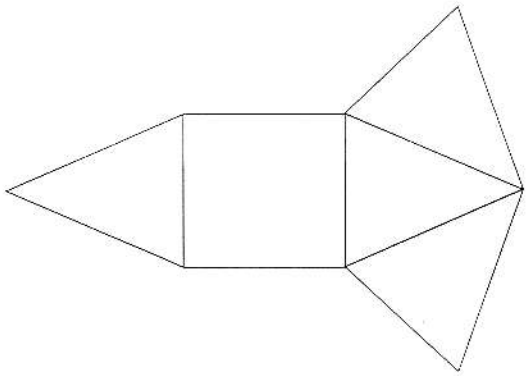


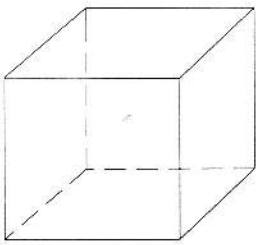
C



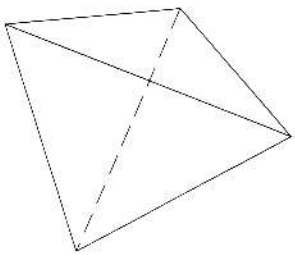
D

2. The figure below shows a net of a solid. Which of the following can be the solid?

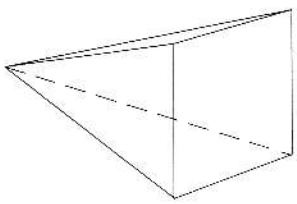




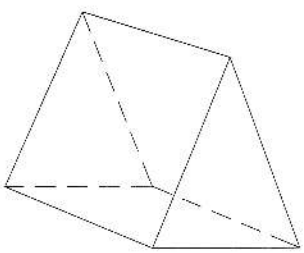
A



B



C



D

WORKSHEET 19

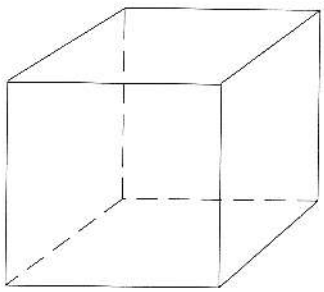
REVISION (2)

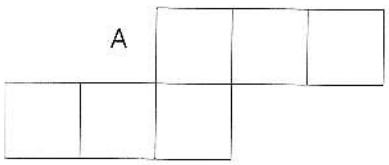
Instructional Objective

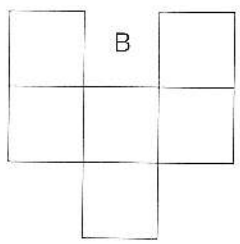
- To revise the topic *Solid Figures*.

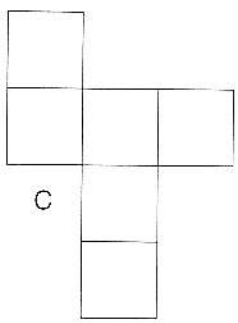
Circle the correct answers. (2 marks each)

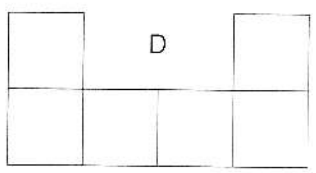
1. The figure below shows a solid. Which of the following can be a net of the solid?



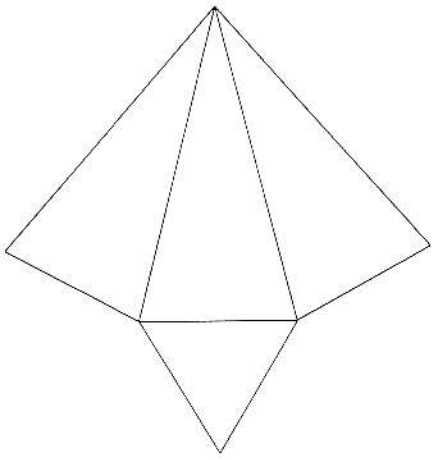


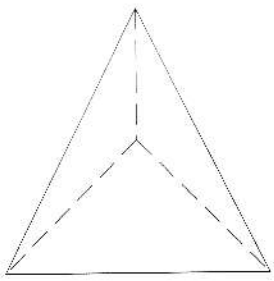




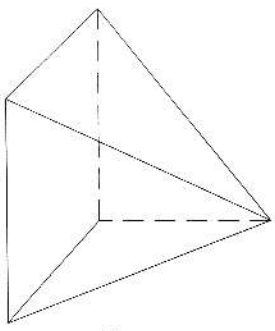


2. The figure below shows a net of a solid. Which of the following can be the solid?

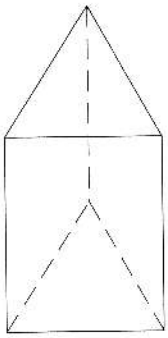




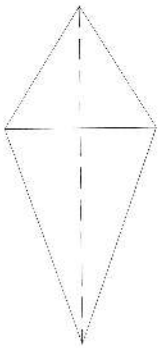
A



B



C



D

WORKSHEET 20

RATIO
RATIO AND FRACTION (1)

Instructional Objective

- To write a ratio with 2 or 3 terms in its simplest form.

Write each ratio in its simplest form. (2 marks each)

1. 16 : 64 = _____
2. 90 : 60 = _____
3. 25 : 40 = _____
4. 24 : 9 = _____
5. 48 : 28 = _____
6. 32 : 72 = _____
7. 54 : 63 = _____
8. 66 : 33 = _____
9. 24 : 36 : 42 = _____
10. 42 : 28 : 56 = _____
11. 21 : 54 : 63 = _____
12. 36 : 76 : 92 = _____
13. 80 : 20 : 60 = _____
14. 35 : 55 : 75 = _____
15. 46 : 76 : 52 = _____
16. 48 : 84 : 54 = _____

Write each ratio in its simplest form. (2 marks each)

17. Jonathan has 84 marbles and Vincent has 30 marbles. Find the ratio of the number of Jonathan's marbles to the number of Vincent's marbles.

    _____

18. Jamie paid $20 for a T-shirt and $35 for a scarf. Find the ratio of the cost of the scarf to the cost of the T-shirt.

    _____

19. Doreen spent $48 and Hazel spent $72. Find the ratio of the amount of money Doreen spent to the amount of money Hazel spent.

    _____

20. A farmer has 60 pigs and 75 goats. Find the ratio of the number of goats to the number of pigs. _____

21. There are 24 boys and 16 girls in a class. Find the ratio of the number of boys to the total number of children. _____

22. Edwin has 36 compact discs and 10 cassettes. Find the ratio of the number of cassettes to the total number of compact discs and cassettes. _____

23. Joshua weighs 54 kg and Mark weighs 45 kg. Find the ratio of Mark's weight to the total weight of the boys. _____

24. Maggie is 144 cm tall and Stefan is 168 cm tall. Find the ratio of Stefan's height to the total height of Maggie and Stefan. _____

25. Cynthia collected 65 flowers, Jane collected 50 flowers and Irene collected 25 flowers. Find the ratio of the number of Cynthia's flowers to the number of Jane's flowers to the number of Irene's flowers. _____

26. Nancy has $39, Daphne has $27 and Wendy has $54. Find the ratio of the amount of Nancy's money to the amount of Daphne's money to the amount of Wendy's money. _____

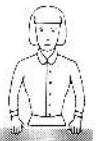
27. The capacities of three pails, A, B and C, are 16 ℓ, 20 ℓ and 18 ℓ respectively. Find the ratio of the capacity of Pail A to the capacity of Pail B to the capacity of Pail C. _____

28. Desmond made 51 paper planes and Fabian made 33 paper planes. Find the ratio of the number of Desmond's paper planes to the number of Fabian's paper planes to their total number of paper planes. _____

29. There are 96 men and 72 women in a queue. Find the ratio of the number of men to the total number of men and women. _____

WORKSHEET 21

RATIO
RATIO AND FRACTION (2)

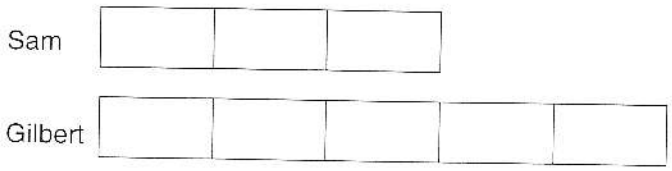


Instructional Objective

- To express one quantity as a fraction of another given their ratio.

Fill in the correct answers. (4 marks each)

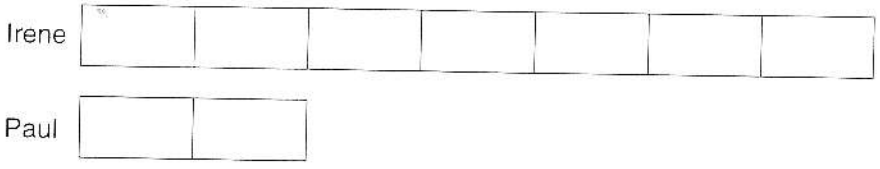
1. The ratio of the number of Sam's pencils to the number of Gilbert's pencils is 3 : 5.



(a) Express the number of Sam's pencils as a fraction of the number of Gilbert's pencils. _____

(b) Express the number of Gilbert's pencils as a fraction of the number of Sam's pencils. _____

2. The ratio of the number of Irene's storybooks to the number of Paul's storybooks is 7 : 2.



(a) Express the number of Irene's storybooks as a fraction of the total number of storybooks. _____

(b) Express the number of Paul's storybooks as a fraction of the total number of storybooks. _____

3. The weights of two bags of rice, A and B, are in the ratio 4 : 9.

   (a) What fraction of the weight of Bag A is the weight of Bag B? _____

   (b) What fraction of the weight of Bag B is the weight of Bag A? _____

4. The ratio of the number of Jack's toy cars to the number of Tom's toy cars is 6 : 5.

   (a) Express the number of Jack's toy cars as a fraction of the total number of toy cars. _____

   (b) Express the number of Tom's toy cars as a fraction of the total number of toy cars. _____

5. Rod P is 64 cm long and Rod Q is 24 cm long.

   (a) What fraction of the length of Rod P is the length of Rod Q? _____

   (b) What fraction of the length of Rod Q is the length of Rod P? _____

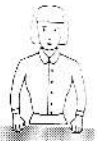
6. Catherine has 60 rubber bands and Margaret has 84 rubber bands.

   (a) Express the number of Catherine's rubber bands as a fraction of the total number of rubber bands. _____

   (b) Express the number of Margaret's rubber bands as a fraction of the total number of rubber bands. _____

WORKSHEET 22

RATIO
RATIO AND FRACTION (3)

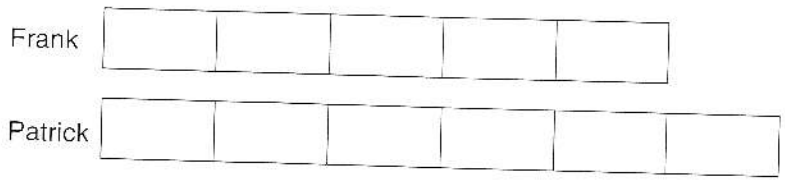


Instructional Objective

- To express one quantity as a ratio of another given their fraction.

Fill in the correct answers. (6 marks each)

1. Frank's height is $\frac{5}{6}$ of Patrick's height.

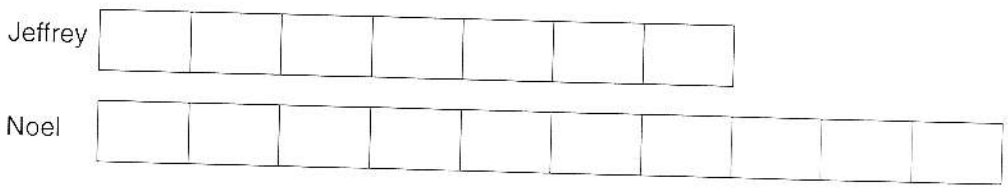


(a) What is the ratio of Frank's height to Patrick's height? _____

(b) What is the ratio of Patrick's height to Frank's height? _____

(c) Express Patrick's height as a fraction of Frank's height. _____

2. Jeffrey has $\frac{7}{10}$ as many paper clips as Noel.



(a) What is the ratio of the number of Jeffrey's paper clips to the number of Noel's paper clips? _____

(b) What is the ratio of the number of Noel's paper clips to the number of Jeffrey's paper clips? _____

(c) Express the number of Noel's paper clips as a fraction of the number of Jeffrey's paper clips. _____

3. Linda's weight is $\frac{5}{8}$ of Rose's weight.

   (a) What is the ratio of Linda's weight to Rose's weight? _____

   (b) What is the ratio of Rose's weight to Linda's weight? _____

   (c) Express Rose's weight as a fraction of Linda's weight. _____

4. Hazel has 5 times as many hair clips as Pauline.

   (a) What is the ratio of the number of Pauline's hair clips to the number of Hazel's hair clips? _____

   (b) What is the ratio of the number of Hazel's hair clips to the number of Pauline's hair clips? _____

   (c) Express the number of Pauline's hair clips as a fraction of the number of Hazel's hair clips. _____

5. Marcus has $\frac{8}{9}$ as many compact discs as Albert.

   (a) What is the ratio of the number of Albert's compact discs to the number of Marcus' compact discs? _____

   (b) What is the ratio of the number of Marcus' compact discs to the number of Albert's compact discs? _____

   (c) What is the ratio of the number of Marcus' compact discs to the total number of compact discs? _____

6. Lionel has $2\frac{1}{2}$ times as much money as Peter.

   (a) What is the ratio of the amount of Lionel's money to the amount of Peter's money? _____

   (b) What is the ratio of the amount of Peter's money to the amount of Lionel's money? _____

   (c) What is the ratio of the amount of Peter's money to the total amount of money? _____

WORKSHEET 23

RATIO
RATIO AND FRACTION (4)

Instructional Objective

- To solve word problems involving ratio and fraction.

Do these sums. (4 marks each)

1. A packet of sweets is divided among three children in the ratio 2 : 7 : 5. If the largest share is 42 sweets, how many sweets is the smallest share?

2. Lucy has $\frac{5}{9}$ as much money as Sally. If the two girls have $630 altogether, how much money does Lucy have?

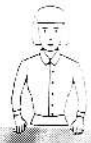
3. There are $\frac{3}{5}$ as many cows as sheep on a farm. If there are 240 cows and sheep altogether, how many more sheep than cows are there?

4. Jason sold $\frac{3}{10}$ as many pens as Mike. If Jason sold 210 fewer pens than Mike, how many pens did they sell altogether?

5. Rachel bought $\frac{5}{12}$ as many stamps as Michelle. Michelle bought 420 more stamps than Rachel. How many stamps did Michelle buy?

WORKSHEET 24

RATIO
RATIO AND FRACTION (5)



Instructional Objective

- To solve word problems involving ratio and fraction.

Do these sums. (4 marks each)

1. The ratio of the number of Kelvin's marbles to the number of Norman's marbles is 3 : 5. The ratio of the number of Norman's marbles to the number of Ian's marbles is 2 : 3. If Ian has 270 more marbles than Kelvin, how many marbles does Norman have?

2. The ratio of the number of Nancy's beads to the number of Alice's beads is 7 : 3. The ratio of the number of Alice's beads to the number of Jamie's beads is 4 : 3. If Nancy and Jamie have 777 beads altogether, how many beads does Alice have?

3. $\frac{2}{5}$ of Vivian's stickers is equal to $\frac{3}{5}$ of Laura's stickers. If they have 150 stickers altogether, how many stickers does Vivian have?

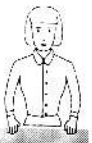
4. $\frac{3}{4}$ of Doreen's storybooks is equal to $\frac{5}{6}$ of Lisa's storybooks. If Doreen has 180 more storybooks than Lisa, how many storybooks do they have altogether?

5. $\frac{3}{8}$ of Ann's money is five times as much as Susan's money. If Ann has $555 more than Susan, how much money does Ann have?

WORKSHEET 25

RATIO

RATIO AND PROPORTION (1)



Instructional Objective

- To write a ratio to show the relative sizes of 2 or 3 quantities which are in proportion.

Complete each table. (4 marks each)

1. The ratio of the number of white dumplings to the number of red dumplings is 3 : 1.

Number of white dumplings		24	42		90
Number of red dumplings	4	8		20	

2. The ratio of the number of chocolate sweets to the number of mint sweets is 7 : 5.

Number of chocolate sweets	14	21			105
Number of mint sweets		15	35	60	

3. The ratio of the amount of orange juice to the amount of carrot juice needed to make a drink is 2 : 3.

Amount of orange juice in litres	2	4		8	
Amount of carrot juice in litres	3		9		15

4. The ratio of the amount of coffee powder to the amount of sugar used to make coffee is 5 : 4.

Amount of coffee powder in grams	5		20		70
Amount of sugar in grams	4	8		40	

Fill in the correct answers. (4 marks each)

5. The table shows the amounts of lemonade and lime juice used to make a drink.

Amount of lemonade in litres	5	20	30	80
Amount of lime juice in litres	2	8	12	32

(a) What is the ratio of the amount of lemonade to the amount of lime juice? _____

(b) How much lime juice is needed to mix with 45 ℓ of lemonade? _____

6. The table shows the number of cups of flour and raisin used to make raisin bread.

Number of cups of flour	10	30	60	70
Number of cups of raisin	3	9	18	21

(a) What is the ratio of the number of cups of raisin to the number of cups of flour? _____

(b) How many cups of flour are needed to mix with 27 cups of raisin? _____

7. The table shows the number of cups of rice and water used to make porridge.

Number of cups of rice	3	5	8	12
Number of cups of water	9	15	24	36

(a) What is the ratio of the number of cups of rice to the number of cups of water? _____

(b) How many cups of water are needed to mix with 9 cups of rice? _____

WORKSHEET 26

RATIO
RATIO AND PROPORTION (2)

Instructional Objective

- To solve word problems involving direct proportion.

Do these sums. (4 marks each)

1. Joyce mixed orange syrup with water in the ratio 2 : 7 to make 18 litres of orange drink. How many litres of orange syrup did she use?

2. Gary mixed Grade A rice and Grade B rice in the ratio 5 : 3 to get 24 kg of Grade C rice. How many kilograms of Grade A rice did he use?

3. Joshua mixed Grade A coffee powder, Grade B coffee powder and Grade C coffee powder in the ratio 4 : 6 : 5 to make 60 kg of coffee powder. How many kilograms of Grade B coffee powder did he use?

4. Vivian mixed potatoes, carrots and beans in the ratio 8 : 1 : 3 to make 480 g of salad. How many grams of potatoes did she use?

5. Mrs Rose mixed chillies, cucumbers and prawns in the ratio 1 : 2 : 7 to make a dish of fried prawns weighing 800 g. How many grams of prawns did she use?

WORKSHEET 27

RATIO
RATIO AND PROPORTION (3)

Instructional Objective

- To solve word problems involving direct proportion.

Do these sums. (4 marks each)

1. For every $50 earned, Mr Edward spends $35 and saves the rest. How much money does he save if he earns $1000?

2. There are 7 men to every 4 women in a small town. If there are 4200 more men than women, how many men are there?

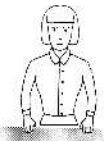
3. For every 30 words that Florence types, Jaclyn types 25 words. If they type 330 words altogether, how many more words does Florence type than Jaclyn?

4. There are 8 boys to every 6 girls in a competition. There are 238 children altogether. How many more boys than girls are there?

5. A farmer has 324 fewer chickens than ducks. If he has 9 chickens for every 12 ducks, how many chickens and ducks does he have in all?

WORKSHEET 28

RATIO
RATIO AND PROPORTION (4)



Instructional Objective

- To solve word problems involving direct proportion.

Do these sums. (4 marks each)

1. A sum of money was divided among three pupils in the ratio 4 : 7 : 3. If the largest share was $84, find the smallest share of money.

2. Lucy and Sharon shared some sweets in the ratio 8 : 5. Lucy received 15 more sweets than Sharon. How many sweets did Sharon receive?

3. A piece of string was cut into two pieces in the ratio 4 : 11. If the longer piece of string was 44 cm long, find the original length of the piece of string.

4. Andrew and Martin shared 48 balloons in the ratio 3 : 13. How many more balloons did Martin get than Andrew?

5. The ratio of Aaron's weight to Patrick's weight is 5 : 9. Aaron is 36 kg lighter than Patrick. Find Patrick's weight.

WORKSHEET 29

RATIO
CHANGING RATIOS (1)

Instructional Objective

- To solve word problems involving changing ratios.

Do these sums. (4 marks each)

1. The ratio of the number of Sam's fish to the number of Ian's fish is 4 : 7. Sam has 84 fish. If Sam gives 14 of his fish to Ian, what will be the new ratio of the number of Sam's fish to the number of Ian's fish?

2. The ratio of the number of members in Team A to the number of members in Team B was 8 : 5. Team A had 40 members. Later, 10 members left Team A and joined Team B. Find the new ratio of the number of members in Team A to the number of members in Team B.

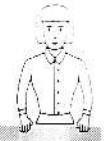
3. The ratio of the number of John's marbles to the number of Aaron's marbles is 8 : 15. Aaron has 105 more marbles than John. If Aaron gives 20 of his marbles to John, what will be the new ratio of the number of John's marbles to the number of Aaron's marbles?

4. The ratio of the amount of Eric's money to the amount of Oliver's money was 3 : 7. Eric had $120 less than Oliver. After Oliver gave $6 to Eric, what was the new ratio of the amount of Eric's money to the amount of Oliver's money?

5. The ratio of the number of students on Bus A to the number of students on Bus B was 5 : 9. Bus A had 20 fewer students than Bus B. Later, 15 students transferred from Bus B to Bus A. Find the new ratio of the number of students on Bus A to the number of students on Bus B.

WORKSHEET 30

RATIO
CHANGING RATIOS (2)



Instructional Objective

- To solve word problems involving changing ratios.

Do these sums. (4 marks each)

1. The ratio of the number of Gina's teddy bears to the number of Jessie's teddy bears is 7 : 4. Gina has 28 teddy bears. If Jessie buys another 5 teddy bears, what will be the new ratio of the number of Gina's teddy bears to the number of Jessie's teddy bears?

2. The ratio of the number of men at a party to the number of women was 9 : 7. There were 24 more men than women. If 6 more women arrived at the party, what was the new ratio of the number of men to the number of women?

3. The ratio of the number of boys in a school club to the number of girls was 6 : 11. There were 330 girls. If 30 girls left the club, find the new ratio of the number of boys to the number of girls.

4. The ratio of the amount of Andrew's money to the amount of Paul's money was 5 : 3. Andrew had $30 more than Paul. Later, Andrew spent $15 on a book. Find the new ratio of the amount of Andrew's money to the amount of Paul's money.

5. The ratio of the number of Cynthia's posters to the number of Laura's posters was 3 : 4. Cynthia had 24 fewer posters than Laura. Later, Laura gave 36 of her posters away to her brother. Find the new ratio of the number of Cynthia's posters to the number of Laura's posters.

WORKSHEET 31

RATIO
CHANGING RATIOS (3)

Instructional Objective

- To solve word problems involving changing ratios.

Do these sums. (4 marks each)

1. The ratio of the number of Jill's beads to the number of Pauline's beads was 7 : 3. After Jill gave 30 of her beads to Pauline, Pauline had $\frac{2}{3}$ as many beads as Jill. How many beads did Jill have at first?

2. The ratio of the number of Linda's stamps to the number of Clara's stamps was 4 : 9. Clara gave $\frac{1}{6}$ of her stamps to Linda. How many stamps did Clara have in the end if Linda had 72 fewer stamps than her?

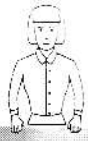
3. The ratio of the number of James' marbles to the number of Mike's marbles was 2 : 9. Mike gave 60 of his marbles to James. How many marbles did James have in the end if he had $\frac{5}{6}$ as many marbles as Mike?

4. The ratio of the number of Ivy's bookmarks to the number of Sue's bookmarks was 8 : 7. Ivy gave $\frac{1}{4}$ of her bookmarks to Sue. How many bookmarks did Ivy have at first if Sue had 48 more bookmarks than her finally?

5. The ratio of the number of Sam's postcards to the number of Alan's postcards was 11 : 4. After Sam gave 64 of his postcards to Alan, Sam had $\frac{7}{8}$ as many postcards as Alan. How many postcards did Alan have in the end?

WORKSHEET 32

RATIO
CHANGING RATIOS (4)



Instructional Objective

- To solve word problems involving changing ratios.

Do these sums. (4 marks each)

1. The ratio of the number of cookies in Box A to the number of cookies in Box B was 6 : 5. After some cookies from Box A were transferred to Box B, both boxes had 132 cookies each. How many cookies were there in Box A at first?

2. The ratio of the number of coins in Piggy Bank X to the number of coins in Piggy Bank Y was 1 : 9. After some coins from Piggy Bank Y were transferred to Piggy Bank X, both piggy banks had 85 coins each. How many coins were there in Piggy Bank Y at first?

3. The ratio of the volume of water in Container M to the volume of water in Container N was 7 : 12. After some of the water in Container N was poured into Container M, both containers had 114 ℓ of water each. Find the volume of water in Container M at first.

4. The ratio of the number of pens in Box A to the number of pens in Box B was 3 : 7. After some pens from Box B were transferred to Box A, both boxes had 60 pens each. How many pens were transferred from Box B to Box A?

5. The ratio of the number of eggs in Basket P to the number of eggs in Basket Q was 8 : 5. After some eggs from Basket P were transferred to Basket Q, both baskets had 52 eggs each. How many eggs were transferred from Basket P to Basket Q?

WORKSHEET 33

REVISION (3)

Instructional Objective

- To revise the topic *Ratio*.

Fill in the correct answers. (2 marks each)

1. Irene, Maggie and Florence have \$36, \$72 and \$48 respectively. Find the ratio of the amount of Irene's money to the amount of Maggie's money to the amount of Florence's money. _____

2. Betty made 85 buns and May made 40 buns. Find the ratio of the number of May's buns to their total number of buns. _____

3. The ratio of the number of Agatha's pencils to the number of Bob's pencils is 8 : 7. Express the number of Bob's pencils as a fraction of their total number of pencils. _____

4. Hazel has $\frac{7}{10}$ as many coins as Victor. What is the ratio of the number of Hazel's coins to their total number of coins? _____

Do these sums. (4 marks each)

5. The ratio of the length of a rectangle to its breadth is 5 : 3. If its perimeter is 128 cm, find its area.

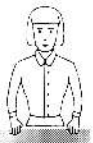
6. The ratio of the amount of Calvin's money to the amount of Mark's money is 3 : 5. The ratio of the amount of Mark's money to the amount of William's money is 3 : 8. The three boys have $448 altogether. How much more money does William have than Calvin?

7. The ratio of the number of passengers on Ship A to the number of passengers on Ship B was 8 : 3. Ship A had 120 more passengers than Ship B. Later, 12 passengers were transferred from Ship A to Ship B. Find the new ratio of the number of passengers on Ship A to the number of passengers on Ship B.

8. The ratio of the number of Gary's marbles to the number of Joe's marbles is 2 : 7. Joe has 630 marbles. If Joe buys another 30 marbles, what will be the new ratio of the number of Gary's marbles to the number of Joe's marbles?

WORKSHEET 34

PERCENTAGE
PART OF A WHOLE AS A PERCENTAGE (1)



Instructional Objective

- To express a whole number out of another whole number as a percentage.

Express each of the following as a percentage. (2 marks each)

1. 15 out of 100 _____
2. 24 out of 100 _____
3. 48 out of 100 _____
4. 57 out of 100 _____
5. 3 out of 10 _____
6. 8 out of 10 _____
7. 11 out of 20 _____
8. 16 out of 20 _____
9. 25 out of 50 _____
10. 38 out of 50 _____
11. 60 out of 200 _____
12. 82 out of 200 _____
13. 54 out of 300 _____
14. 90 out of 300 _____
15. 40 out of 1000 _____
16. 350 out of 1000 _____

Fill in the correct answers. (2 marks each)

17. Jasmine had $100. She spent $68. What percentage of her money did she spend? _____

18. Vivian had 50 stamps. She used 14 stamps. What percentage of her stamps did she use? _____

19. Victor had 80 marbles. He gave 40 marbles to his brother. What percentage of his marbles did he give to his brother? _____

20. June bought 25 storybooks. She read 12 of them. What percentage of her storybooks were not read? _____

21. Paul had 200 postcards. He lost 8 of them. What percentage of his postcards had he left? _____

22. There are 40 students in a class. 24 of them are boys. What percentage of the class are girls? _____

23. Rose and Mary shared 90 stickers. Rose received 27 stickers. What percentage of the stickers did Rose receive? _____

24. Jim and Tom have 400 picture cards altogether. If 220 picture cards belong to Jim, what percentage of the picture cards belong to Tom? _____

25. A baker made 600 buns. He sold 540 of them. What percentage of the buns did he have left? _____

26. Eric has 60 green paper clips and 40 blue paper clips. What percentage of the paper clips are green? _____

27. Kelvin bought 8 Christmas greeting cards and 2 New Year greeting cards. What percentage of the greeting cards were Christmas greeting cards? _____

28. Lisa spent $41 and had $9 left. What percentage of her money did she spend? _____

29. A factory employs 720 male workers and 280 female workers. What percentage of the workers are female? _____

30. Jason collected 13 maps of Singapore and 7 maps of China. What percentage of his maps were of Singapore? _____

WORKSHEET 35

PERCENTAGE
PART OF A WHOLE AS A PERCENTAGE (2)

Instructional Objectives

- To express a fraction as a percentage.
- To express a percentage as a fraction in its simplest form.

Express each fraction as a percentage. (2 marks each)

1. $\frac{19}{100}$ = _____
2. $\frac{53}{100}$ = _____
3. $\frac{6}{10}$ = _____
4. $\frac{15}{20}$ = _____
5. $\frac{12}{40}$ = _____
6. $\frac{44}{50}$ = _____
7. $\frac{18}{60}$ = _____
8. $\frac{20}{80}$ = _____
9. $\frac{9}{25}$ = _____
10. $\frac{45}{75}$ = _____
11. $\frac{110}{200}$ = _____
12. $\frac{75}{300}$ = _____
13. $\frac{1}{2}$ = _____
14. $\frac{3}{4}$ = _____
15. $\frac{2}{5}$ = _____
16. $\frac{7}{8}$ = _____
17. $\frac{90}{150}$ = _____
18. $\frac{80}{250}$ = _____
19. $\frac{370}{500}$ = _____
20. $\frac{960}{1000}$ = _____

Express each percentage as a fraction in its simplest form. (2 marks each)

21. 10% = _____
22. 40% = _____
23. 5% = _____
24. 8% = _____

25. 2% = _____

26. 6% = _____

27. 15% = _____

28. 16% = _____

29. 21% = _____

30. 25% = _____

31. 32% = _____

32. 38% = _____

33. 44% = _____

34. 45% = _____

35. 50% = _____

36. 68% = _____

37. 72% = _____

38. 75% = _____

39. 86% = _____

40. 96% = _____

Which is the greatest? Circle it. (2 marks each)

41. $\frac{3}{10}$, 40%, $\frac{2}{8}$

42. 24%, $\frac{1}{5}$, $\frac{3}{20}$

43. $\frac{5}{8}$, $\frac{1}{2}$, 64%

44. $\frac{1}{4}$, 21%, $\frac{9}{50}$

Which is the smallest? Circle it. (2 marks each)

45. 72%, $\frac{7}{10}$, $\frac{4}{5}$

46. $\frac{3}{4}$, $\frac{13}{20}$, 70%

47. 82%, $\frac{190}{200}$, $\frac{45}{50}$

48. $\frac{14}{25}$, 55%, $\frac{40}{80}$

WORKSHEET 36

PERCENTAGE
PART OF A WHOLE AS A PERCENTAGE (3)

Instructional Objective

- To express a decimal as a percentage and vice versa.

Express each decimal as a percentage. (2 marks each)

1. 0.2 = _____
2. 0.6 = _____
3. 0.9 = _____
4. 0.4 = _____
5. 0.17 = _____
6. 0.28 = _____
7. 0.36 = _____
8. 0.43 = _____
9. 0.51 = _____
10. 0.65 = _____
11. 0.74 = _____
12. 0.88 = _____
13. 0.95 = _____
14. 0.02 = _____
15. 0.005 = _____
16. 0.011 = _____
17. 0.375 = _____
18. 0.632 = _____
19. 0.814 = _____
20. 0.296 = _____
21. 0.733 = _____
22. 0.158 = _____
23. 0.551 = _____
24. 0.477 = _____
25. 0.969 = _____
26. 0.064 = _____

Express each percentage as a decimal. (2 marks each)

27. 7% = _____

28. 3% = _____

29. 18% = _____

30. 26% = _____

31. 33% = _____

32. 47% = _____

33. 52% = _____

34. 60% = _____

35. 78% = _____

36. 81% = _____

37. 90% = _____

38. 15% = _____

39. 36% = _____

40. 58% = _____

41. 70% = _____

42. 99% = _____

43. 22% = _____

44. 40% = _____

45. 69% = _____

46. 86% = _____

Which is the greatest? Circle it. (2 marks each)

47. 46%, 0.06, 0.1

48. 0.8, 90%, 0.82

49. 0.31, 0.5, 37%

50. 56%, 0.07, 0.64

Which is the smallest? Circle it. (2 marks each)

51. 0.02, 6%, 0.4

52. 24%, 0.35, 0.09

53. 0.008, 0.01, 5%

54. 0.05, 0.8%, 0.009

WORKSHEET 37

PERCENTAGE
PART OF A WHOLE AS A PERCENTAGE (4)

Instructional Objective

- To solve word problems involving percentage.

Do these sums. (4 marks each)

1. Kevin has 15 blue marbles, 25 green marbles and 10 yellow marbles. What percentage of his marbles are yellow?

2. John, Darren and Paul shared 90 sweets. John got 24 sweets, Darren got 39 sweets and Paul got the remaining sweets. What percentage of the sweets did Paul get?

3. Shauna donated $20 to charity and had $60 left. What percentage of her money did she have left?

4. Jessie spent $16 on a magazine, $26 on a book and had $18 left. What percentage of her money did she spend?

5. Jane and Cindy have 200 photographs altogether. Jane has 32 fewer photographs than Cindy. What percentage of the photographs are Jane's?

WORKSHEET 38

PERCENTAGE
PART OF A WHOLE AS A PERCENTAGE (5)

Instructional Objective

- To solve word problems involving percentage.

Do these sums. (4 marks each)

1. A farmer collected 800 fruits. 14% of them were durians, 35% of them were apples and the rest were pears. How many pears did he collect?

2. Norman had $200. He spent 25% of it on a shirt and 30% of the remainder on a pair of jeans. How much money had he left?

3. 500 tourists visited a museum last month. 15% of them were Chinese, 35% of them were Americans and 20% of the remainder were Japanese. How many more Chinese tourists than Japanese tourists were there?

4. Linda made 120 tarts. She gave 10% of them to her best friend, 15% of them to her neighbours and 40% of the rest to her grandparents. How many tarts did she have left?

5. Pamela bought 150 stamps. She used 20% of them on Monday, 20% of them on Tuesday and 20% of the remainder on Wednesday. If she used 25% of the rest on Thursday, how many stamps did she use on Thursday?

WORKSHEET 39

PERCENTAGE
PART OF A WHOLE AS A PERCENTAGE (6)

Instructional Objective

- To solve word problems involving percentage.

Do these sums. (4 marks each)

1. The number of babies born at a hospital was 320 last month. It decreased by 15% this month. How many babies were born at the hospital this month?

2. A salesman's income was $2400 in June. His income increased by 30% in July. What was his total income in June and July?

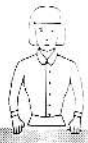
3. In 1999, 150 children were enrolled in Primary 1 at a certain school. The number of children enrolled increased by 20% in 2000. In 2001, the number of children enrolled decreased by 20%. How many children were enrolled in 2001?

4. Jane had $1200 savings in a bank. She withdrew some money yesterday and her savings decreased by 30%. She withdrew some more money today and her savings decreased by 20%. How much savings did she have left?

5. A club had 5000 members in 1998. The number of club members decreased by 10% in 1999. It increased by 30% in 2000. How many more club members were there in 2000 than in 1998?

WORKSHEET 40

PERCENTAGE
PART OF A WHOLE AS A PERCENTAGE (7)



Instructional Objective

- To solve word problems involving percentage.

Do these sums. (4 marks each)

1. The usual selling prices of a handbag and a set of jewellery were $990 and $550 respectively. Jane bought them at a 10% discount during a sale. How much did she pay altogether?

2. Sally wanted to buy a cordless phone and a printer that cost $160 and $380 respectively. If the salesman gave her a 15% discount, how much discount did she get altogether?

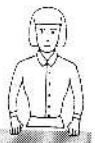
3. Gilbert bought a watch for $2800. Jack bought a similar watch at a 20% discount. How much less money did Jack pay than Gilbert?

4. Bernard bought a painting for $3600. Lucas bought a similar painting that cost 35% more than Bernard's painting. How much money did Lucas pay for his painting?

5. The total cost price of 50 teddy bears was $150. They were sold at 80% more than their cost price. Find the selling price of each teddy bear.

WORKSHEET 41

PERCENTAGE
ONE QUANTITY AS A PERCENTAGE OF ANOTHER (1)



Instructional Objective

- To express one quantity as a percentage of another.

Fill in the correct answers. (2 marks each)

1. Express 80¢ as a percentage of $2. _____
2. Express 95¢ as a percentage of $5. _____
3. Express 40¢ as a percentage of $8. _____
4. Express $2 as a percentage of $10. _____
5. Express $15 as a percentage of $20. _____
6. Express $12 as a percentage of $30. _____
7. Express 25 cm as a percentage of 3 m. _____
8. Express 70 cm as a percentage of 4 m. _____
9. Express 1.8 m as a percentage of 6 m. _____
10. Express 75 m as a percentage of 1 km. _____
11. Express 36 m as a percentage of 9 km. _____
12. Express 2.1 km as a percentage of 5 km. _____
13. Express 240 g as a percentage of 3 kg. _____
14. Express 200 g as a percentage of 2.4 kg. _____
15. Express 1.3 kg as a percentage of 2 kg. _____

16. Express 600 ml as a percentage of 4 ℓ. _____

17. Express 350 ml as a percentage of 2.5 ℓ. _____

18. Express 210 ml as a percentage of 7 ℓ. _____

19. Express 60¢ as a percentage of 50¢. _____

20. Express 87¢ as a percentage of 30¢. _____

21. Express 70¢ as a percentage of 25¢. _____

22. Express \$3 as a percentage of \$2. _____

23. Express \$9 as a percentage of \$3. _____

24. Express \$15 as a percentage of \$8. _____

25. Express 1 m as a percentage of 40 cm. _____

26. Express 12 m as a percentage of 6 m. _____

27. Express 24 m as a percentage of 10 m. _____

28. Express 2 km as a percentage of 500 m. _____

29. Express 3.5 km as a percentage of 2 km. _____

30. Express 9 km as a percentage of 8 km. _____

31. Express 1 kg as a percentage of 200 g. _____

32. Express 16 kg as a percentage of 12 kg. _____

33. Express 24 kg as a percentage of 20 kg. _____

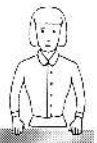
34. Express 7.5 ℓ as a percentage of 3 ℓ. _____

35. Express 9 ℓ as a percentage of 5 ℓ. _____

36. Express 7 ℓ as a percentage of 4 ℓ. _____

WORKSHEET 42

PERCENTAGE
ONE QUANTITY AS A PERCENTAGE OF ANOTHER (2)



Instructional Objective

- To solve word problems involving one quantity as a percentage of another.

Do these sums. (4 marks each)

1. The usual price of a dining table was $480. It was sold for $300. Express the discount as a percentage of the usual price.

2. Jason was 120 cm tall a few years ago. Now he is 150 cm tall. Express the increase in his height as a percentage of his original height.

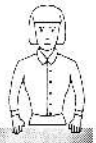
3. A fan club had 4000 members last year. It has 3500 members this year. Express the decrease in the number of members as a percentage of the number of members last year.

4. Lucas had $80. He spent part of his money and had $60 left. Express the amount of money he spent as a percentage of the original amount of money.

5. There were 200 people in a hall. The number of people later increased to 500. Express the increase in the number of people as a percentage of the original number of people.

WORKSHEET 43

PERCENTAGE
ONE QUANTITY AS A PERCENTAGE OF ANOTHER (3)



Instructional Objective

- To solve word problems involving one quantity as a percentage of another.

Do these sums. (4 marks each)

1. Pauline's savings was increased from $250 last week to $300 this week. By what percentage was her savings increased?

2. There were 1200 people at a train station. One hour later, there were 900 people left. By what percentage did the number of people decrease?

3. Norman weighed 30 kg last year. Now he weighs 42 kg. By what percentage did his weight increase?

4. There were 1500 viewers at a show on the first day. On the second day, there were 2500 viewers. By what percentage did the number of viewers increase?

5. The usual price of a television set was $800. Sarah bought it for $700 after a discount. How many per cent discount did she get?

WORKSHEET 44

PERCENTAGE
ONE QUANTITY AS A PERCENTAGE OF ANOTHER (4)

Instructional Objective

- To solve word problems involving one quantity as a percentage of another.

Do these sums. (4 marks each)

1. There are 500 chickens and 300 ducks on a farm. How many per cent more chickens than ducks are there?

2. There were 2000 spectators at a circus show. 400 of them were children. How many per cent more adults than children were there?

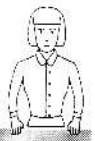
3. Samuel has 600 stamps and Simon has 900 stamps. How many per cent fewer stamps does Samuel have than Simon?

4. Edwin spent $75 and Jack spent $60. How many per cent less did Jack spend than Edwin?

5. Joyce and Mary have 420 stickers altogether. If Joyce has 180 stickers, how many per cent fewer stickers does she have than Mary?

WORKSHEET 45

PERCENTAGE
ONE QUANTITY AS A PERCENTAGE OF ANOTHER (5)



Instructional Objective

- To solve word problems involving one quantity as a percentage of another.

Do these sums. (4 marks each)

1. Rod A is 160 cm long. Rod B is 15% longer than Rod A. How long is Rod B?

2. Alvin weighs 50 kg. Mark weighs 20% less than Alvin. What is Mark's weight?

3. A company employs 600 female workers. It employs 40% more male workers than female workers. How many workers does it employ altogether?

4. A pair of jeans costs $60. A pair of pants costs 25% less than the pair of jeans. What is their total cost?

5. A butcher sold 450 kg of pork last month. He sold 90% less pork this month. Find the total weight of pork he sold in the two months.

WORKSHEET 46

PERCENTAGE
ONE QUANTITY AS A PERCENTAGE OF ANOTHER (6)

Instructional Objective

- To solve word problems involving one quantity as a percentage of another.

Do these sums. (4 marks each)

1. Winnie had $100. She spent 20% of her money on a dictionary and 50% of the remainder on a table lamp. How many per cent more did she spend on the table lamp than the dictionary?

2. Calvin, Peter and Joe shared 400 stamps. Calvin received 40% of the stamps and Peter received 25% of the remainder. Joe received the rest of the stamps. How many per cent fewer stamps did Calvin receive than Joe?

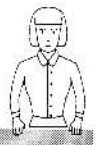
3. Michael has 240 picture cards. David has 40% more picture cards than Michael. Vincent has $\frac{3}{4}$ as many picture cards as David. Express the number of Vincent's picture cards as a percentage of the number of Michael's picture cards.

4. Eric sold 300 pens. Gary sold 80% more pens than Eric. Ivan sold 40% as many pens as Gary. How many per cent fewer pens did Ivan sell than Eric?

5. Tom has 90 bookmarks. Sam has twice as many bookmarks as Tom. William has 20% as many bookmarks as Sam. How many per cent more bookmarks does Tom have than William?

WORKSHEET 47

PERCENTAGE
SOLVING PERCENTAGE PROBLEMS BY UNITARY METHOD (1)



Instructional Objectives

- To find the whole given the value of a percentage part of it.
- To solve word problems involving percentage using the unitary method.

Do these sums. (4 marks each)

1. 30% of a box of paper clips are green. If there are 36 green paper clips, how many paper clips are there in the box?

2. 45% of the pupils in a school are boys. If there are 440 girls, how many pupils are there in the school?

3. Janice has 144 photographs. This is 80% of Clara's photographs. How many photographs does Clara have?

4. Jackie has 75% as much money as Sue. If Jackie has $45, how much money do they have altogether?

5. Leslie spent 15% of his money and had $238 left. How much money did he spend?

WORKSHEET 48

PERCENTAGE
SOLVING PERCENTAGE PROBLEMS BY UNITARY METHOD (2)

Instructional Objective

- To solve word problems involving percentage using the unitary method.

Do these sums. (4 marks each)

1. The price of a hi-fi set was increased by 25% to $750. Find the original price of the hi-fi set.

2. The number of Rachel's compact discs was increased by 12% to 168. How many compact discs did she have at first?

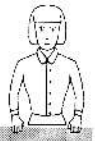
3. At a party, the number of men was decreased by 20% to 160 and the number of women was increased by 10% to 330. Find the overall increase or decrease in the number of people.

4. The number of local students at a hostel was increased by 30% to 65. The number of foreign students was increased by 5% to 42. Find the overall increase in the number of students.

5. Mr Simon's monthly salary was increased by 15% to $2070. Mrs Simon's monthly salary was decreased by 20% to $1200. What was the overall increase or decrease in their total salary?

WORKSHEET 49

PERCENTAGE
SOLVING PERCENTAGE PROBLEMS BY UNITARY METHOD (3)



Instructional Objective

- To solve word problems involving percentage using the unitary method.

Do these sums. (4 marks each)

1. The volume of water in a container was increased by 15%. If the increase was 300 ml, find the volume of the water in the container before the increase.

2. Gordon's weight increases by 20% this year. If the increase in his weight is 10 kg, how much does he weigh now?

3. The number of apple trees on a farm was increased by 40%. The increase was 200 apple trees. Find the number of apple trees after the increase.

4. The number of fishes in a large aquarium was decreased by 35%. The decrease was 42 fishes. What was the number of fishes after the decrease?

5. The number of motorcycles at a car park was decreased by 60%. The decrease was 150 motorcycles. How many motorcycles were there after the decrease?

WORKSHEET 50

PERCENTAGE
SOLVING PERCENTAGE PROBLEMS BY UNITARY METHOD (4)

Instructional Objective

- To solve word problems involving percentage using the unitary method.

Do these sums. (4 marks each)

1. Jamie has 288 photographs. She has 20% fewer photographs than Michelle. How many photographs does Michelle have?

2. Andy has $200. He has 25% more money than Peter. How much more money does Andy have than Peter?

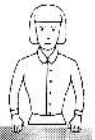
3. 40% of a clown's balloons are yellow and the rest are white. If he has 64 more white balloons than yellow balloons, how many balloons does he have altogether?

4. 55% of the workers at a factory are locals and the rest are foreigners. There are 90 fewer foreign workers than local workers. How many local workers are there?

5. Kenneth spent 12% of his money on a shirt and 25% of the remainder on a tie. If he had $396 left, how much money did he have at first?

WORKSHEET 51

REVISION (4)



Instructional Objective

- To revise the topic *Percentage*.

Fill in the correct answers. (2 marks each)

1. Express $\frac{17}{25}$ as a percentage. _____

2. Express $\frac{5}{8}$ as a percentage. _____

3. Express 60% as a fraction in its simplest form. _____

4. Express 85% as a fraction in its simplest form. _____

5. Express 0.7 as a percentage. _____

6. Express 0.036 as a percentage. _____

7. Express 30% as a decimal. _____

8. Express 6% as a decimal. _____

9. Express 60¢ as a percentage of $3. _____

10. Express 18 cm as a percentage of 5 m. _____

11. Express 4.2 kg as a percentage of 2 kg. _____

12. Express 2 ℓ as a percentage of 800 ml. _____

Do these sums. (4 marks each)

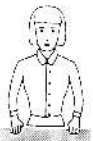
13. There are 800 pens. 20% of them are blue, 25% of them are green and 40% of the remainder are black. The rest of the pens are red. How many red pens are there?

14. There were 1400 people in a village in 1998. The number of people increased by 12% in 1999 and later decreased by 25% in 2000. How many fewer people were there in 2000 than in 1998?

15. The number of orange trees on a farm was decreased by 18% to 2870. The number of banana trees was increased by 16% to 2320. Find the overall increase or decrease in the number of trees.

WORKSHEET 52

SPEED (1)



Instructional Objectives

- To read and write units of speed such as km/h, m/min, m/s and cm/s.
- To find the average speed for a journey given the distance travelled and the time taken.

Do these sums. (4 marks each)

1. A lorry travelled 270 km in 5 hours. Find its average speed in km/h.

2. Simon swam 576 m in 12 minutes. Find his average speed in m/min.

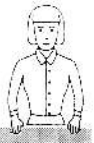
3. Douglas ran 150 m in 25 seconds. Find his average speed in m/s.

4. Lisa walked 1176 cm in 42 seconds. What was her average speed in cm/s?

5. A train travelled 1708 km in 7 hours. Find its average speed in km/h.

WORKSHEET 53

SPEED (2)



Instructional Objectives

- To read and write units of speed such as km/h, m/min, m/s and cm/s.
- To find the distance travelled for a journey given the average speed and the time taken.

Do these sums. (4 marks each)

1. Edward jogged at an average speed of 85 m/min for 24 minutes. Find the distance he jogged.

2. A motorcyclist travelled at an average speed of 96 km/h for $3\frac{1}{2}$ hours. What was the distance he travelled?

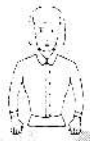
3. A platoon of soldiers marched at an average speed of 20 m/min for 16 minutes. What was the distance they marched?

4. A farmer pushed a cart at an average speed of 28 cm/s for 50 seconds. How many metres did the cart travel?

5. An aeroplane flew at an average speed of 255 km/h for 9 hours. What was the distance it travelled?

WORKSHEET 54

SPEED (3)



Instructional Objectives

- To read and write units of speed such as km/h, m/min, m/s and cm/s.
- To find the time taken for a journey given the average speed and the distance travelled.

Do these sums. (4 marks each)

1. Margaret cycled 540 m at an average speed of 3 m/s. How long did she cycle? Give your answer in minutes.

2. Ivan sprinted 352 m at an average speed of 11 m/s. Find the time he took.

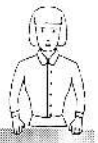
3. A ship sailed 1050 km at an average speed of 75 km/h. How long did it sail?

4. Gary drove at an average speed of 84 km/h from Town A to Town B. If the two towns were 273 km apart, find the time he took.

5. Jack drove from City X to City Y at an average speed of 60 km/h. The two cities were 570 km apart. What was the time taken?

WORKSHEET 55

SPEED (4)



Instructional Objective

- To solve multi-step word problems involving speed.

Do these sums. (4 marks each)

1. Jimmy took 5 minutes to swim 560 m. If he continued swimming for another 12 minutes at the same average speed, how much further did he swim?

2. Ricky set off from Town A at 7.30 a.m. and reached Town B at 8.15 a.m. The two towns were 60 km apart. If he had to reach Town B at 8.06 a.m., at what average speed would he have to travel?

3. Nancy left Town M at 6.20 p.m. and reached Town N at 7.50 p.m. Her average speed for the journey was 70 km/h. If she had travelled at an average speed of 50 km/h, how much longer would she take to reach Town N?

4. Cities P and Q were 180 km apart. John left City P at 4.15 p.m. and reached City Q at 6.30 p.m. If he had increased his average speed by 20 km/h, how much earlier would he have reached City Q?

5. Alfred set off from Port A at 9.10 a.m. towards Port B that was 250 km away. He reached Port B at 12.30 p.m. and continued towards Port C that was 165 km away at the same average speed. When did he reach Port C?

WORKSHEET 56

SPEED (5)

Instructional Objective

- To solve multi-step word problems involving speed.

Do these sums. (4 marks each)

1. Jenny took 5 hours to travel from Town A to Town B at an average speed of 60 km/h. Victor took only $3\frac{3}{4}$ hours for the same journey. What was Victor's average speed?

2. Leslie took $4\frac{1}{2}$ hours to travel from Village A to Village B that was 405 km away. Alice took 3 hours to travel from Village B to Village A. Find the difference in their average speeds.

3. Pamela and Ann set off from Town P to Town Q at the same time. The two towns were 600 km apart. When Pamela reached Town Q 5 hours later, Ann was still 120 km away from Town Q. If Ann continued at the same average speed, how long did she take to reach Town Q?

4. Calvin and Bob set off from City X to City Y at 5.05 p.m. Calvin travelled at an average speed of 72 km/h and reached City Y at 6.35 p.m. If Bob's average speed was 60 km/h, at what time did he reach City Y?

5. Oliver and Paul started from Town M towards Town N at 10.40 a.m. Towns M and N were 360 km apart. If Oliver reached Town N at 3.10 p.m. and Paul reached Town N 18 minutes later, find the difference in their average speeds.

WORKSHEET 57

SPEED (6)

Instructional Objective

- To solve multi-step word problems involving speed.

Do these sums. (4 marks each)

1. Willie took 7 hours to travel from City A to City B. He drove at an average speed of 90 km/h for the first 3 hours and then at an average speed of 55 km/h for the rest of the journey. Find his average speed for the whole journey.

2. City C and City D were 840 km apart. James travelled the first 264 km at an average speed of 66 km/h and the rest of the journey at an average speed of 72 km/h. What was his average speed for the whole journey?

3. Louis travelled from Town P to Town Q at an average speed of 88 km/h in $2\frac{1}{4}$ hours. He then continued from Town Q to Town R at an average speed of 96 km/h in $1\frac{3}{4}$ hours. What was his average speed for the whole journey?

4. Mike drove from Town X to Town Y at an average speed of 76 km/h in 5 hours 15 minutes. He continued driving for another $3\frac{3}{4}$ hours from Town Y to Town Z. If his average speed for the whole journey was 81 km/h, find his average speed from Town Y to Town Z.

5. Nicholas travelled from City K to City L at an average speed of 68 km/h for 4 hours. Without stopping, he travelled from City L to City M which were 160 km apart. If his average speed for the whole journey was 72 km/h, what was his average speed from City L to City M?

WORKSHEET 58

SPEED (7)

Instructional Objective

- To solve multi-step word problems involving speed.

Do these sums. (4 marks each)

1. Alvin took 2 hours to cover $\frac{1}{4}$ of a journey. He covered the remaining 180 km in 3 hours. What was his average speed for the whole journey?

2. Patrick covered $\frac{2}{5}$ of a journey in 50 minutes and the remaining 210 km in 2 hours 40 minutes. Find his average speed for the whole journey.

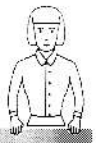
3. Sam drove from Town A to Town B. He covered $\frac{1}{3}$ of the journey in the first hour and $\frac{2}{5}$ of the journey in the second hour. He took $\frac{1}{2}$ hour to cover the remaining 40 km. Find his average speed for the whole journey.

4. Angela cycled from Village A to Village B. She took 30 minutes to cover $\frac{3}{10}$ of the journey, 1 hour to cover $\frac{3}{8}$ of the journey and 1 hour to cover the remaining 6.5 km. What was her average speed for the whole journey?

5. A train travelled from City P to City Q. It covered $\frac{5}{12}$ of the journey in the first 3 hours, $\frac{1}{4}$ of the journey in the next hour and the remaining 180 km in 2 hours. Find its average speed for the whole journey.

WORKSHEET 59

SPEED (8)



Instructional Objective

- To solve multi-step word problems involving speed.

Do these sums. (4 marks each)

1. A lorry driver took 3 hours to travel from a port to a warehouse. For the first $\frac{6}{11}$ of the journey, he travelled at an average speed of 60 km/h. If his average speed for the whole journey was 55 km/h, find his average speed for the remaining journey.

2. Adrian took 5 hours to travel from his village to a city. His average speed for the whole journey was 72 km/h. For the first $\frac{5}{8}$ of the journey, he travelled at an average speed of 75 km/h. What was his average speed for the rest of the journey?

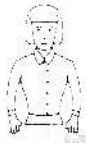
3. Martin travelled at an average speed of 90 km/h from an airport to a hotel. He travelled at an average speed of 108 km/h for the first $\frac{3}{10}$ of the journey. If he took 2 hours for the whole journey, find his average speed for the remaining journey.

4. Wendy travelled at an average speed of 120 km/h from her house to a hospital. She took 2 hours for the whole journey. For the first $\frac{5}{6}$ of the journey, she travelled at an average speed of 150 km/h. Find her average speed for the remaining journey.

5. Edwin took 6 hours to travel from the city to the countryside. His average speed for the whole journey was 80 km/h. He travelled at an average speed of 70 km/h for the first $\frac{7}{12}$ of the journey. What was his average speed for the remaining journey?

WORKSHEET 60

REVISION (5)



Instructional Objective

- To revise the topic *Speed*.

Do these sums. (4 marks each)

1. Towns A and B were 270 km apart. Roger left Town A at 8.05 a.m. and reached Town B at 10.35 a.m. If he had decreased his average speed by 18 km/h, how much later would he have reached Town B?

2. Rose and Lucy set off from Town C to Town D at the same time. The two towns were 640 km apart. 8 hours later, Rose reached Town D but Lucy was still 128 km away from Town D. If Lucy continued at the same average speed, how much longer did she take than Rose to reach Town D?

3. Martin travelled from Town P to Town Q at an average speed of 90 km/h for 2 hours. Without stopping, he travelled from Town Q to Town R which were 300 km apart. If his average speed for the whole journey was 80 km/h, what was his average speed from Town Q to Town R?

4. A truck travelled from Warehouse X to Warehouse Y. It covered $\frac{4}{9}$ of the journey in the first 2 hours, $\frac{1}{3}$ of the journey in the next $1\frac{1}{2}$ hours and the remaining 90 km in $1\frac{1}{2}$ hours. Find its average speed for the whole journey.

5. James took 5 hours to travel from an airport to a shopping mall. His average speed for the whole journey was 84 km/h. He travelled at an average speed of 100 km/h for the first $\frac{5}{7}$ of the journey. What was his average speed for the remaining journey?

ANSWERS

Worksheet 1

1. (a) $16 + a$ (b) 34 (c) 40
2. (a) $b + 37$ (b) 52 (c) 86
3. (a) $\$(c + 13)$ (b) \$19 (c) \$40
4. (a) $(8 + d)$ kg (b) 11 kg (c) 14 kg
5. (a) $\$(e + 9)$ (b) \$23 (c) \$61

Worksheet 2

1. (a) $(32 - f)$ kg (b) 29 kg (c) 27 kg
2. (a) $42 - g$ (b) 38 (c) 34
3. (a) $h - 22$ (b) 18 (c) 48
4. (a) $i - 5$ (b) 14 (c) 28
5. (a) $60 - j$ (b) 43 (c) 19

Worksheet 3

1. (a) $4k$ (b) 8 (c) 28
2. (a) $6m$ (b) 18 (c) 30
3. (a) $3n$ (b) 24 (c) 39
4. (a) $\$9p$ (b) \$45 (c) \$135
5. (a) $3q$ kg (b) 30 kg (c) 75 kg

Worksheet 4

1. (a) $\frac{r}{5}$ kg (b) 3 kg (c) 7 kg
2. (a) $\$\frac{s}{3}$ (b) \$4 (c) \$9
3. (a) $\frac{30}{t}$ m (b) 6 m (c) 3 m
4. (a) $\frac{u}{4}$ (b) 5 (c) 16
5. (a) $\frac{36}{v}$ min (b) 18 min (c) 3 min

Worksheet 5

1. 12
2. 13
3. 16
4. 21
5. 30
6. 35
7. 42
8. 54
9. 49
10. 68
11. 9
12. 11
13. 23
14. 9
15. 31
16. 6
17. 44
18. 3
19. 58
20. 0
21. 16
22. 40
23. 56
24. 112
25. 80
26. 64
27. 96
28. 144
29. 160
30. 800
31. 12
32. $\frac{1}{12}$
33. 8
34. $\frac{1}{8}$
35. 6
36. $\frac{1}{6}$
37. 4
38. $\frac{1}{4}$
39. 2
40. $\frac{1}{2}$

Worksheet 6

1. (a) $a - 11$ (b) 15 (c) 64
2. (a) $b - 3$ (b) 29 (c) 42
3. (a) $90 - 2c$ (b) 58 (c) 40
4. (a) $\$(2d - 2)$ (b) \$58 (c) \$106
5. (a) $2e - 15$ (b) 7 (c) 21

Worksheet 7

1. (a) $17 + 4f$ (b) 37 (c) 49
2. (a) $\$(3g + 12)$ (b) \$39 (c) \$57
3. (a) $7h + 36$ (b) 64 (c) 78

4. (a) $4i$ (b) 28
   (c) 48
5. (a) $6j + 58$ (b) 118
   (c) 154

Worksheet 8

1. (a) $\frac{8 + k}{2}$ (b) 6
   (c) 9
2. (a) $\$\left(\frac{20 + m}{5}\right)$ (b) \$8
   (c) \$14
3. (a) $\$\left(\frac{11 + n}{6}\right)$ (b) \$4
   (c) \$6
4. (a) $p + \frac{p}{2}$ (b) 63
   (c) 96
5. (a) $q + \frac{q}{4}$ (b) 50
   (c) 75

Worksheet 9

1. (a) $8r - 9$ (b) 87
   (c) 135
2. (a) $\$(30 - 2s)$ (b) \$24
   (c) \$20
3. (a) $60 - t$ (b) 54
   (c) 45
4. (a) $3u - 5$ (b) 7
   (c) 22
5. (a) $v^2 - v$ (b) 20
   (c) 90

Worksheet 10

1. (a) $\$\left(\frac{100 - w}{3}\right)$ (b) \$30
   (c) \$24
2. (a) $\left(\frac{x}{4} - 5\right)$ kg (b) 7 kg
   (c) 15 kg
3. (a) $\frac{80 - y}{6}$ (b) 12
   (c) 11
4. (a) $z - \frac{z}{5}$ (b) 12
   (c) 20
5. (a) $30 - \frac{30}{a}$ (b) 15
   (c) 27

Worksheet 11

1. (a) $\frac{3b}{5}$ (b) 9
   (c) 27
2. (a) $\frac{56}{c}$ (b) 28
   (c) 8
3. (a) $\frac{3d}{8}$ cm (b) 24 cm
   (c) 36 cm
4. (a) $\frac{3e}{2}$ (b) 9
   (c) 33
5. (a) $12f$ (b) 36
   (c) 60

Worksheet 12

1. 18	2. 38	3. 33
4. 26	5. 59	6. 1
7. 10	8. 27	9. 7
10. 20	11. 4	12. 2
13. 2	14. 1	15. 12
16. 15	17. 6	18. 6
19. 22	20. 20	21. 16
22. 18	23. 9	24. 10
25. 25	26. 42	27. 78
28. 20	29. 68	30. 42
31. 14	32. 41	33. 8
34. 7	35. 39	36. 38
37. 89	38. 46	39. 12
40. 15		

Worksheet 13

1. $3a$	2. $3b$	3. $4c$
4. $8d$	5. $9e$	6. $9f$
7. 0	8. $3h$	9. $7i$
10. $5j$	11. $2k$	12. $6m$
13. $10n$	14. $8p$	15. $14q$
16. $17r$	17. $4s$	18. $7t$
19. u	20. $3v$	21. $3w$
22. $2x$	23. $10y$	24. $2z$

25. $8a + 4$ 26. $6b + 6$
27. $3 + 3c$ 28. $8 + 7d$
29. $15 + 4e$ 30. $10f + 5$
31. $4g + 3$ 32. $4 + 5h$
33. $3i - 3$ 34. $4j + 6$
35. $5 + 6k$ 36. $4m - 1$
37. $2 + 5n$ 38. $6p + 4$

39. $3q + 9$
40. $6 + 13r$
41. $9 + 10s$
42. $12t + 15$
43. $17u + 12$
44. $12 + 6v$
45. $4w + 2$
46. $3x + 6$
47. $3 + y$
48. $7 + 2z$
49. $13a + 7$
50. $11b + 1$

Worksheet 14

1. 24
2. 2
3. 45
4. 5
5. 5
6. 18
7. 12
8. 25
9. 114
10. 96
11. $9a$
12. $3b$
13. $8c$
14. 0
15. $11e$
16. $6f + 5$
17. $5g + 6$
18. $4h + 1$
19. $13i + 6$
20. $11 + 5j$
21. (a) $\$(37 - 4x)$ (b) \$21
    (c) \$9
22. (a) $\frac{y-3}{3}$ (b) 2
    (c) 4
23. (a) $z + z^2 + z^3$ (b) 155
    (c) 819

Worksheet 15

1. c
2. d
3. a
4. b

	Solid	Number of flat faces	Number of curved faces	Total number of faces
5.	A	2	1	3
6.	B	6	0	6
7.	C	5	0	5
8.	D	5	0	5
9.	E	4	0	4
10.	F	2	1	3

Worksheet 16

1. A, C, F
2. C, D

Worksheet 17

1. D
2. C

Worksheet 18

1. B
2. C

Worksheet 19

1. A, C
2. D

Worksheet 20

1. 1 : 4
2. 3 : 2
3. 5 : 8
4. 8 : 3
5. 12 : 7
6. 4 : 9
7. 6 : 7
8. 2 : 1
9. 4 : 6 : 7
10. 3 : 2 : 4
11. 7 : 18 : 21
12. 9 : 19 : 23
13. 4 : 1 : 3
14. 7 : 11 : 15
15. 23 : 38 : 26
16. 8 : 14 : 9
17. 14 : 5
18. 7 : 4
19. 2 : 3
20. 5 : 4
21. 3 : 5
22. 5 : 23
23. 5 : 11
24. 7 : 13
25. 13 : 10 : 5
26. 13 : 9 : 18
27. 8 : 10 : 9
28. 17 : 11 : 28
29. 4 : 7

Worksheet 21

1. (a) $\frac{3}{5}$ (b) $\frac{5}{3}$
2. (a) $\frac{7}{9}$ (b) $\frac{2}{9}$
3. (a) $\frac{9}{4}$ (b) $\frac{4}{9}$
4. (a) $\frac{6}{11}$ (b) $\frac{5}{11}$
5. (a) $\frac{3}{8}$ (b) $\frac{8}{3}$
6. (a) $\frac{5}{12}$ (b) $\frac{7}{12}$

Worksheet 22

1. (a) 5 : 6 (b) 6 : 5 (c) $\frac{6}{5}$

2. (a) 7 : 10 (b) 10 : 7 (c) $\frac{10}{7}$

3. (a) 5 : 8 (b) 8 : 5 (c) $\frac{8}{5}$

4. (a) 1 : 5 (b) 5 : 1 (c) $\frac{1}{5}$

5. (a) 9 : 8 (b) 8 : 9 (c) 8 : 17

6. (a) 5 : 2 (b) 2 : 5 (c) 2 : 7

Worksheet 23

1. 12 2. $225 3. 60
4. 390 5. 720

Worksheet 24

1. 300 2. 252 3. 90
4. 3420 5. $600

Worksheet 25

1.

12	24	42	60	90
4	8	14	20	30

2.

14	21	49	84	105
10	15	35	60	75

3.

2	4	6	8	10
3	6	9	12	15

4.

5	10	20	50	70
4	8	16	40	56

5. (a) 5 : 2 (b) 18 ℓ
6. (a) 3 : 10 (b) 90
7. (a) 1 : 3 (b) 27

Worksheet 26

1. 4 litres 2. 15 kg 3. 24 kg
4. 320 g 5. 560 g

Worksheet 27

1. $300 2. 9800 3. 30
4. 34 5. 2268

Worksheet 28

1. $36 2. 25 3. 60 cm
4. 30 5. 81 kg

Worksheet 29

1. 10 : 23 2. 6 : 7 3. 28 : 41
4. 8 : 17 5. 4 : 3

Worksheet 30

1. 4 : 3 2. 6 : 5 3. 3 : 5
4. 4 : 3 5. 6 : 5

Worksheet 31

1. 210 2. 270 3. 100
4. 128 5. 128

Worksheet 32

1. 144 2. 153 3. 84 ℓ
4. 24 5. 12

Worksheet 33

1. 3 : 6 : 4 2. 8 : 25 3. $\frac{7}{15}$
4. 7 : 17 5. 960 cm^2 6. $217
7. 15 : 7 8. 3 : 11

Worksheet 34

1. 15% 2. 24% 3. 48%
4. 57% 5. 30% 6. 80%
7. 55% 8. 80% 9. 50%
10. 76% 11. 30% 12. 41%
13. 18% 14. 30% 15. 4%
16. 35% 17. 68% 18. 28%
19. 50% 20. 52% 21. 96%
22. 40% 23. 30% 24. 45%
25. 10% 26. 60% 27. 80%
28. 82% 29. 28% 30. 65%

Worksheet 35

1. 19% 2. 53% 3. 60%
4. 75% 5. 30% 6. 88%
7. 30% 8. 25% 9. 36%
10. 60% 11. 55% 12. 25%

13.	50%	14.	75%	15.	40%
16.	87.5%	17.	60%	18.	32%
19.	74%	20.	96%	21.	$\frac{1}{10}$
22.	$\frac{2}{5}$	23.	$\frac{1}{20}$	24.	$\frac{2}{25}$
25.	$\frac{1}{50}$	26.	$\frac{3}{50}$	27.	$\frac{3}{20}$
28.	$\frac{4}{25}$	29.	$\frac{21}{100}$	30.	$\frac{1}{4}$
31.	$\frac{8}{25}$	32.	$\frac{19}{50}$	33.	$\frac{11}{25}$
34.	$\frac{9}{20}$	35.	$\frac{1}{2}$	36.	$\frac{17}{25}$
37.	$\frac{18}{25}$	38.	$\frac{3}{4}$	39.	$\frac{43}{50}$
40.	$\frac{24}{25}$	41.	40%	42.	24%
43.	64%	44.	$\frac{1}{4}$	45.	$\frac{7}{10}$
46.	$\frac{13}{20}$	47.	82%	48.	$\frac{40}{80}$

Worksheet 36

1.	20%	2.	60%	3.	90%
4.	40%	5.	17%	6.	28%
7.	36%	8.	43%	9.	51%
10.	65%	11.	74%	12.	88%
13.	95%	14.	2%	15.	0.5%
16.	1.1%	17.	37.5%	18.	63.2%
19.	81.4%	20.	29.6%	21.	73.3%
22.	15.8%	23.	55.1%	24.	47.7%
25.	96.9%	26.	6.4%	27.	0.07
28.	0.03	29.	0.18	30.	0.26
31.	0.33	32.	0.47	33.	0.52
34.	0.6	35.	0.78	36.	0.81
37.	0.9	38.	0.15	39.	0.36
40.	0.58	41.	0.7	42.	0.99
43.	0.22	44.	0.4	45.	0.69
46.	0.86	47.	46%	48.	90%
49.	0.5	50.	0.64	51.	0.02
52.	0.09	53.	0.008	54.	0.009

Worksheet 37

1.	20%	2.	30%	3.	75%
4.	70%	5.	42%		

Worksheet 38

1.	408	2.	$105	3.	25
4.	54	5.	18		

Worksheet 39

1.	272	2.	$5520	3.	144
4.	$672	5.	850		

Worksheet 40

1.	$1386	2.	$81	3.	$560
4.	$4860	5.	$5.40		

Worksheet 41

1.	40%	2.	19%	3.	5%
4.	20%	5.	75%	6.	40%
7.	$8\frac{1}{3}\%$	8.	$17\frac{1}{2}\%$	9.	30%
10.	7.5%	11.	0.4%	12.	42%
13.	8%	14.	$8\frac{1}{3}\%$	15.	65%
16.	15%	17.	14%	18.	3%
19.	120%	20.	290%	21.	280%
22.	150%	23.	300%	24.	$187\frac{1}{2}\%$
25.	250%	26.	200%	27.	240%
28.	400%	29.	175%	30.	$112\frac{1}{2}\%$
31.	500%	32.	$133\frac{1}{3}\%$	33.	120%
34.	250%	35.	180%	36.	175%

Worksheet 42

1.	$37\frac{1}{2}\%$	2.	25%	3.	$12\frac{1}{2}\%$
4.	25%	5.	150%		

Worksheet 43

1.	20%	2.	25%	3.	40%
4.	$66\frac{2}{3}\%$	5.	$12\frac{1}{2}\%$		

Worksheet 44

1.	$66\frac{2}{3}\%$	2.	300%	3.	$33\frac{1}{3}\%$
4.	20%	5.	25%		

Worksheet 45

1. 184 cm 2. 40 kg 3. 1440
4. $105 5. 495 kg

Worksheet 46

1. 100% 2. $11\frac{1}{9}\%$ 3. 105%
4. 28% 5. 150%

Worksheet 47

1. 120 2. 800 3. 180
4. $105 5. $42

Worksheet 48

1. $600 2. 150
3. Decrease, 10 4. 17
5. Decrease, $30

Worksheet 49

1. 2000 ml 2. 60 kg 3. 700
4. 78 5. 100

Worksheet 50

1. 360 2. $40 3. 320
4. 495 5. $600

Worksheet 51

1. 68% 2. $62\frac{1}{2}\%$ 3. $\frac{3}{5}$
4. $\frac{17}{20}$ 5. 70% 6. 3.6%
7. 0.3 8. 0.06 9. 20%
10. $3\frac{3}{5}\%$ 11. 210% 12. 250%
13. 264 14. 224
15. Decrease, 310

Worksheet 52

1. 54 km/h 2. 48 m/min
3. 6 m/s 4. 28 cm/s
5. 244 km/h

Worksheet 53

1. 2040 m 2. 336 km 3. 320 m
4. 14 m 5. 2295 km

Worksheet 54

1. 3 min 2. 32 s 3. 14 h
4. $3\frac{1}{4}$ h 5. $9\frac{1}{2}$ h

Worksheet 55

1. 1344 m 2. 100 km/h
3. $\frac{3}{5}$ h 4. $\frac{9}{20}$ h 5. 2.42 p.m.

Worksheet 56

1. 80 km/h 2. 45 km/h
3. $6\frac{1}{4}$ h 4. 6.53 p.m.
5. 5 km/h

Worksheet 57

1. 70 km/h 2. 70 km/h
3. $91\frac{1}{2}$ km/h 4. 88 km/h
5. 80 km/h

Worksheet 58

1. 48 km/h 2. 100 km/h
3. 60 km/h 4. 8 km/h 5. 90 km/h

Worksheet 59

1. 50 km/h 2. $67\frac{1}{2}$ km/h
3. 84 km/h 4. 60 km/h
5. 100 km/h

Worksheet 60

1. $\frac{1}{2}$ h 2. 2 h 3. 75 km/h
4. 81 km/h 5. 60 km/h

EPB

What You Will Find In This Book:

- **60 Worksheets**, including **Topical Worksheets** and **Revision Worksheets**.
- Questions based on the **latest** Primary 6A Mathematics **syllabus**.
- Questions **follow the topics order** in the Primary 6A Mathematics textbooks and workbooks.
- **Instructional objectives** at the beginning of each worksheet to highlight the aim of the exercises and for easy reference by teachers.

What This Book Offers:

- **Systematic practice and revision** to provide Primary 6 pupils with the essential practice needed to excel in their school work and assessments.
- Worksheets become **progressively more difficult and challenging** as the pupil acquires new skills in each unit.