

Answer Key

COVERS TOPICS TAUGHT IN GRADE 6

Section A

(10 × 1 marks)

1. (4) 2. (3) 3. (1) 4. (2) 5. (2)
6. (3) 7. (1) 8. (4) 9. (4) 10. (1)

(5 × 2 marks)

11. (3) 12. (2) 13. (2) 14. (3) 15. (3)

Section B

(10 × 1 marks)

16. 510 000
17. 7
18. $\frac{27}{400}$
19. 2 h 31 min
20. 576 cm
21. 2 : 3 : 4
22. 25°
23. 51 kg
24. 30
25. 56

(5 × 2 marks)

Correct method and correct answer: M1, A1

Correct answer with no working: A2

Correct method and wrong answer: M1, A0

Incorrect method but correct answer (fluke): M0, A0

26. $15 \div \frac{1}{8} = 15 \times 8 = 120$ (M1, A1)
27. $\angle EOB = 360^\circ - 90^\circ - 65^\circ - 45^\circ - 38^\circ$
 $= 122^\circ$ (M1, A1)
28. $(268 - 102) + 1 = 167$ (M1)
OR $102 \text{ to } 268 \rightarrow 167$
 $166 + 100 = 267$ (A1)
29. red : blue : green
5 : 3
1 : 5
3 : 15
5 : 3 : 15

red : green
5 : 15
1 : 3 (M1, A1)

30. Total cost = R1.20 + (7 × R0.80)
 $= R6.80$ (M1, A1)

Section C

(5 × 2 marks)

For Q1 to Q5, apply the following:

Correct method and correct answer: M1, A1

Correct answer with no working: A2

Correct method and wrong answer: M1, A0

Incorrect method but correct answer (fluke): M0, A0

1. $R475 \times 12 \times 7 = R39\ 900$ (M1)
 $R39\ 900 + R33\ 000 = R72\ 900$ (A1)

2. $12 \times 2\frac{1}{4} \text{ cm} = 27 \text{ cm}$ (M1)
 $27 \text{ cm} + 1\frac{5}{6} \text{ cm} = 28\frac{5}{6} \text{ cm}$ (A1)

3. Total of 4 numbers: $225 \times 4 = 900$ (M1)
Total of 2 other numbers: $900 - 208 - 375$
 $= 317$ (A1)

4. $\angle BCA = 180^\circ - 90^\circ - 37^\circ$
 $= 53^\circ$
 $\angle CDE = 180^\circ - 112^\circ$
 $= 68^\circ$
 $\angle ECD = 180^\circ - 68^\circ - 68^\circ$
 $= 44^\circ$ (M1)
 $\angle ACE = 180^\circ - 53^\circ - 44^\circ$
 $= 83^\circ$ (A1)

5. 30% $\rightarrow 450$
1% $\rightarrow \frac{450}{30} = 15$
Number of men: 100% $\rightarrow 15 \times 100$
 $= 1500$ (M1)
50% $\rightarrow 450$
Number of children: 100% $\rightarrow 450 \times 2$
 $= 900$

Total number of people: $1500 + 900 + 450$
 $= 2850$ (A1)

6.

2 units = R3682 – R1946 = R1736 (M1)
 1 unit = R1736 ÷ 2 = R868 (M1)
 3 units = 3 × R868 = R2604
 (A1)

7. (a)

Students only have to draw 2 unit shapes. (A2)

(b) 4 (A1)

8. After second transfer:

A

B

Before second transfer:

Before first transfer:

18 units = 108 kg (M2)
 1 unit = 108 ÷ 18 = 6 kg
 14 units = 14 × 6 = 84 kg (M1, A1)

9. $62.5 \times 16 \times 25 = 25\,000 \text{ cm}^3$
 $= 25 \text{ litres}$ (M2)
 $25 \text{ litres} - 5.8 \text{ litres} = 19.2 \text{ litres}$ (M1, A1)

10. Area of folded triangle = $\frac{1}{2} \times 7 \text{ cm} \times 5 \text{ cm}$
 $= 17\frac{1}{2} \text{ cm}^2$ (M1)
 Area of folded paper = $20 \text{ cm} \times 12 \text{ cm}$
 $= 240 \text{ cm}^2$ (M1)
 Area of remaining folded sheet of paper
 $= 240 \text{ cm}^2 - 17\frac{1}{2} \text{ cm}^2 = 222\frac{1}{2} \text{ cm}^2$ (M1)
 Area of remaining unfolded sheet of paper
 $= 2 \times 222\frac{1}{2} \text{ cm}^2 = 445 \text{ cm}^2$ (A1)

11. $150 \div 5 = 30$
 Cost of all oranges: $30 \times R2.40$
 $= R72$ (M1)
 $60 \div 3 = 20$
 Cost of all apples: $20 \times R1.50$
 $= R30$ (M1)
 Change: $R120 - R72 - R30 = R18$ (M1, A1)

12. $15 \text{ cm} \times 75\% = 11.25 \text{ cm}$
 New length after the increase:
 $15 \text{ cm} + 11.25 \text{ cm} = 26.25 \text{ cm}$ (M1)
 $5 \text{ cm} \times 40\% = 2 \text{ cm}$
 New breadth after the increase:
 $5 \text{ cm} + 2 \text{ cm} = 7 \text{ cm}$ (M1)
 Area of new figure = $26.25 \text{ cm} \times 7 \text{ cm}$
 $= 183.75 \text{ cm}^2$ (M1, A1)

13. Cost of 8 watermelons and 10 papayas:
 $R45.75 \times 2 = R91.50$
 Cost of 3 watermelons: $R91.50 - R66$
 $= R25.50$ (M1)
 Cost of 12 watermelons: $4 \times R25.50$
 $= R102$ (M1, A1)

14. Total on first 4 days: 4601×4
 $= 18\,404$ (M1)
 Total on the next 2 days: 3900×2

$$= 7800$$

Total on 7 days: $18\,404 + 7800 + 2090$
 $= 28\,294$ (M1)

Average for 7 days: $28\,294 \div 7$
 $= 4042$ (A1)

15.

Connie : Dion : Emmy

$$\begin{array}{ccc} 2 & : & 3 \\ \times 2 \curvearrowright 4 & : & 6 \\ & & 2 : 7 \\ & & \times 3 \curvearrowright 6 : 21 \\ 4 & : & 6 : 21 \end{array}$$
 (M2)

Connie : Dion
 $4 : 21$

Connie has $\frac{4}{21}$ of the number of beads
 Emmy has. (A1)

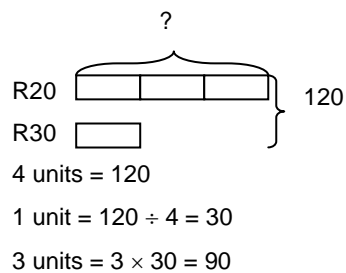
16.

(a)

Tickets	Discount
First 20 tickets	R0
21st to 50th tickets	$30 \times R4.50 = R135$
51st to 100th tickets	$50 \times R5.50 = R275$
101st to 120th tickets	$20 \times R6.50 = R130$
Total discount	R540

Mr White received R540 discount. (M2, A1)

(b)



Mr White bought 90 R20 tickets. (M1, A1)

17.

$$80 \text{ cm} \times 30 \text{ cm} \times 50 \text{ cm}$$

$$= 120\,000 \text{ cm}^3$$
 (M1)

Volume of water in Tank A:

$$\frac{5}{8} \times 120\,000 \text{ cm}^3 = 75\,000 \text{ cm}^3$$
 (M1)

$$5 \text{ units} = 75\,000$$
 (M1)

$$1 \text{ unit} = 75\,000 \div 5$$

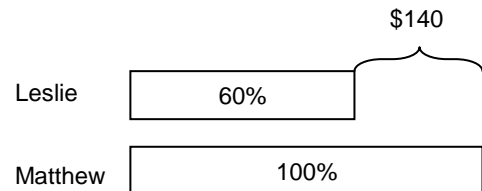
$$= 15\,000$$

$$3 \text{ units} = 3 \times 15\,000$$

$$= 45\,000$$

45 000 cm³ of water are needed to fill up Tank B. (M1, A1)

18.



$$40\% \rightarrow R140$$

$$1\% \rightarrow R140 \div 40 = R\frac{7}{2}$$

$$60\% \rightarrow 60 \times R\frac{7}{2} = R210$$

$$100\% \rightarrow 100 \times R\frac{7}{2} = R350$$
 (M2)



$$100\% \rightarrow R210$$

$$1\% \rightarrow R210 \div 100 = R\frac{21}{10}$$

$$60\% \rightarrow 60 \times R\frac{21}{10} = R126$$
 (M1)

$$R210 + R350 + R126 = R686$$
 (M1, A1)

They have R686 altogether.