WA3 Revision Paper

Decimals, measurement, time, area and perimeter

30 marks | Suggested time: 50 minutes | No calculator

Answer all questions. Show working for Sections B and C. Give fractions in their simplest form. Diagrams are not drawn to scale.

Section A | 6 × 1 mark

1. Use the digits 3, 4 and 5 once each to make a decimal with one digit before the decimal point. What is the greatest possible number less than 5.4? [1]

(1) 4.53 (2) 5.34

(3) 5.43 (4) 5.44

Answer:

2. A number with three decimal places rounds to 6.0 to the nearest tenth. What is its greatest possible value? [1]

(1) 6.004 (2) 6.049

(3) 6.050 (4) 6.099

Answer:

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3. A container with 5 identical packets has mass 4.36 kg. The empty container has mass 0.46 kg. Find the mass of one packet. [1]

(1) 0.078 kg

(2) 0.78 kg

(3) 0.872 kg

(4) 3.90 kg

Answer:

4. A ribbon 8.4 m long is cut into 7 equal pieces. How much shorter is each piece than 1.25 m? [1]

(1) 0.05 m

(2) 0.5 m

(3) 1.05 m

(4) 1.2 m

Answer:

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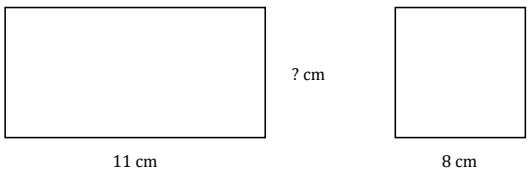
5. A rectangle has the same perimeter as a square of side 8 cm. Its length is 11 cm. Find its area. [1]



(1) 40 cm^2

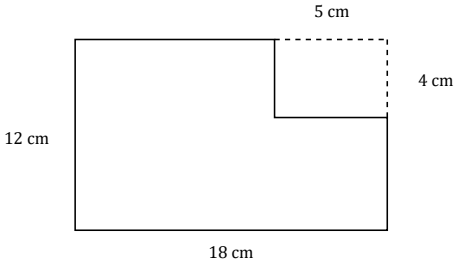
(2) 55 cm^2

(3) 64 cm^2

(4) 88 cm^2

Answer:

6. A 5 cm by 4 cm rectangle is removed from the top-right corner of an 18 cm by 12 cm rectangle. Find the perimeter of the remaining figure. [1]



(1) 42 cm

(2) 51 cm

(3) 60 cm

(4) 78 cm

Answer:

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Section B | 6 × 2 marks

7. Four identical bottles and a 2.36 kg box have a total mass of 20.20 kg. Find the mass of one bottle. [2]

Answer:

8. Three bottles each contain 1.25 litres of juice. All the juice is shared equally among 5 children. How many millilitres does each child receive? [2]

Answer:

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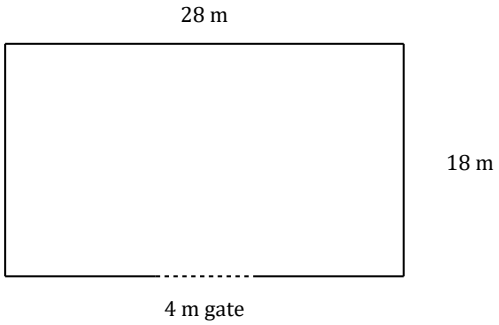
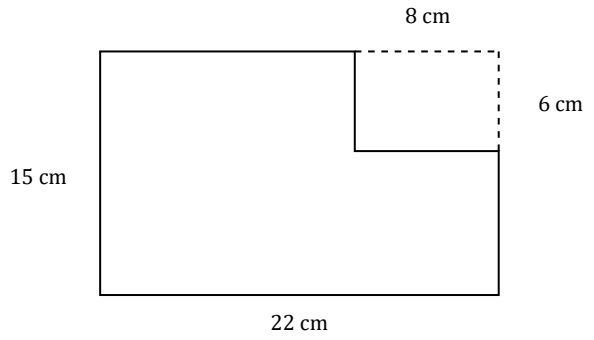
9. A 28 m by 18 m field is fenced with two strands of wire. Both strands stop at a 4 m gate opening. What total length of wire is needed? [2]



Answer:

10. The figure is made by removing an 8 cm by 6 cm rectangle from the top-right corner of a 22 cm by 15 cm rectangle. Find its area. [2]



Answer:

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11. Four notebooks cost $2.85 each and two files cost $1.65 each. Find the change from $20. [2]

Answer:

12. A train leaves at 20:40 and arrives at 06:15 the next morning. It stops for 35 minutes during the journey. For how long is it moving? [2]

Answer:

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Section C | 3 × 4 marks

13. A red rope and a blue rope have total length 12.8 m. The red rope is 2.4 m longer. [4]

(a) Find the length of the blue rope. [2]

(b) A damaged 0.4 m section is removed from each rope. Each remaining rope is cut into 4 equal pieces. Find the total length of one red piece and one blue piece. [2]

Answer:

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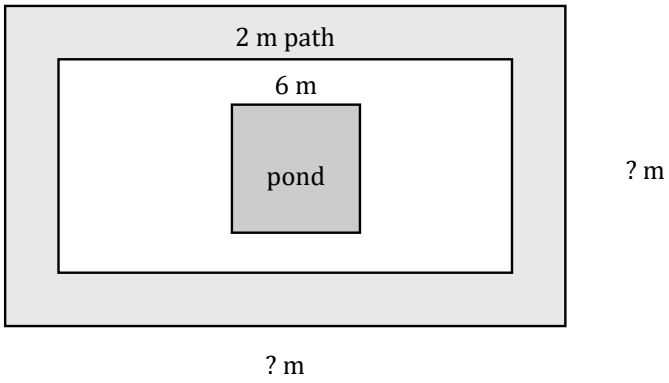
14. A rectangular garden has perimeter 84 m. Its length is 6 m greater than its breadth. A 2 m wide path runs inside all four edges. A square pond of side 6 m lies wholly inside the inner rectangle. The rest is grass. [4]

(a) Find the length and breadth of the garden. [2]

(b) Find the area of grass. [2]



Answer:

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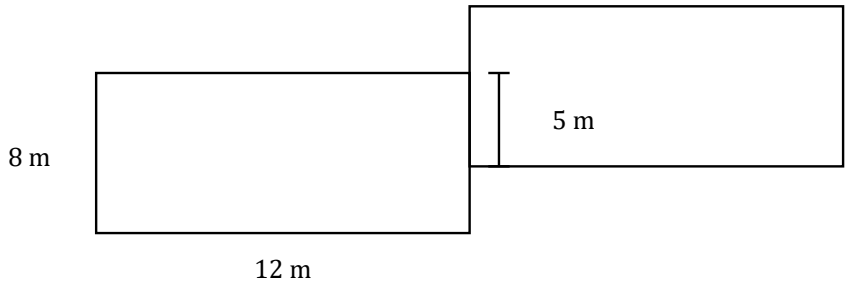
15. Two identical rectangular plots, each 12 m by 8 m, share a 5 m edge segment as shown. There is no fence along the shared edge. [4]

(a) Find the perimeter of the combined plot. [2]

(b) A 4 m gate is left in the outer boundary. Fencing costs $1.50 per metre. Find the fencing cost. [2]



Answer:

WA3 Worked Solutions

1. 5.34

Correct option: (2)

5.43 is too large.

The greatest valid arrangement below 5.4 is 5.34.

2. 6.049

Correct option: (2)

6.050 rounds up to 6.1.

The greatest three-place decimal below 6.050 is 6.049.

3. 0.78 kg

Correct option: (2)

Packets together: 4.36 - 0.46 = 3.90 kg.

One packet: 3.90 ÷ 5 = 0.78 kg.

WA3 Worked Solutions

4. 0.05 m

Correct option: (1)

Each piece = 8.4 ÷ 7 = 1.2 m.

Difference = 1.25 - 1.20 = 0.05 m.

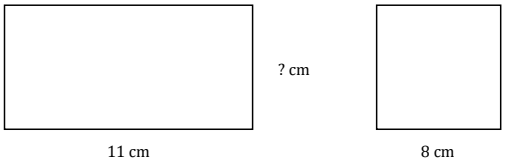
5. 55 cm^2

Correct option: (2)

Square perimeter = 4 × 8 = 32 cm.

Rectangle length + breadth = 16 cm.

Breadth = 16 - 11 = 5 cm. Area = 11 × 5 = 55 cm^2.

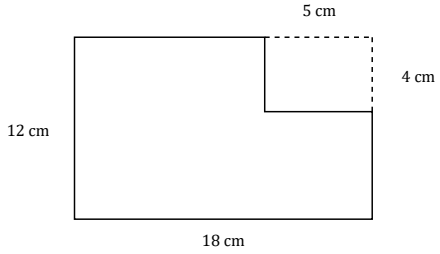


6. 60 cm

Correct option: (3)

Removing the corner replaces two outer edge lengths with equal inner lengths.

Perimeter stays 2 × (18 + 12) = 60 cm.



WA3 Worked Solutions

7. 4.46 kg

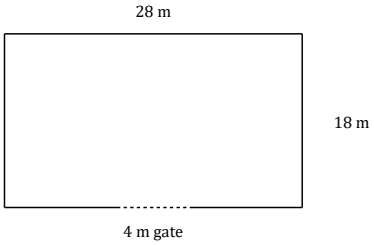
Bottles together = 20.20 - 2.36 = 17.84 kg.
One bottle = 17.84 ÷ 4 = 4.46 kg.

8. 750 ml

Total = 1.25 × 3 = 3.75 litres = 3750 ml.
Each child receives 3750 ÷ 5 = 750 ml.

9. 176 m

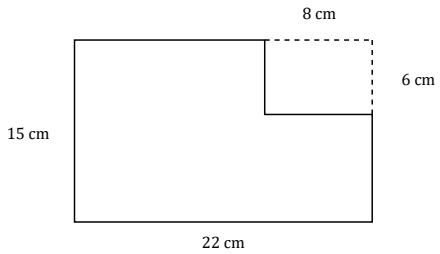
Perimeter = 2 × (28 + 18) = 92 m.
Each strand needs 92 - 4 = 88 m.
Two strands need 88 × 2 = 176 m.



WA3 Worked Solutions

10. 282 cm^2

Full rectangle = 22 × 15 = 330 cm^2.
Removed part = 8 × 6 = 48 cm^2.
Remaining area = 330 - 48 = 282 cm^2.



11. $5.30

Notebooks: 4 × $2.85 = $11.40.
Files: 2 × $1.65 = $3.30.
Change = $20 - $11.40 - $3.30 = $5.30.

12. 9 hours

20:40 to midnight = 3 h 20 min.
Midnight to 06:15 = 6 h 15 min.
Elapsed time = 9 h 35 min. Moving time = 9 hours.

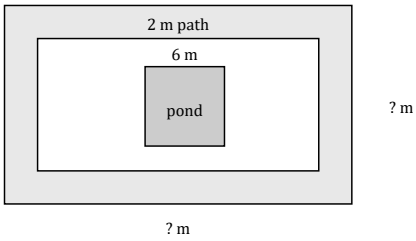
WA3 Worked Solutions

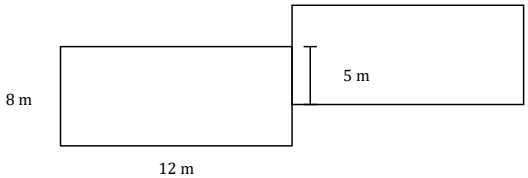
13. (a) 5.2 m; (b) 3 m

Two blue lengths = 12.8 - 2.4 = 10.4 m.
Blue length = 10.4 ÷ 2 = 5.2 m. [2]
Red length = 5.2 + 2.4 = 7.6 m.
Red piece = (7.6 - 0.4) ÷ 4 = 1.8 m.
Blue piece = (5.2 - 0.4) ÷ 4 = 1.2 m.
Combined piece length = 1.8 + 1.2 = 3 m. [2]

14. (a) 24 m by 18 m; (b) 244 m^2

Length + breadth = 84 ÷ 2 = 42 m.
Two breadths = 42 - 6 = 36 m. Breadth = 18 m; length = 24 m. [2]
Inner dimensions = 24 - 4 = 20 m and 18 - 4 = 14 m.
Inner area = 20 × 14 = 280 m^2.
Grass area = 280 - 6 × 6 = 244 m^2. [2]



15. (a) 70 m; (b) $99

Each plot perimeter = 2 × (12 + 8) = 40 m.
Combined perimeter = 40 + 40 - 2 × 5 = 70 m. [2]
Fenced length = 70 - 4 = 66 m.
Cost = 66 × $1.50 = $99. [2]