

7 Year 5 Term 2 Week 7 Homework

7.1 Topic 1 — Measurement (Length)

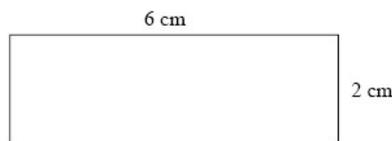
1. The perimeter of a square flower-pot is 3 quarters of a metre in length. What is the length of each side in cm?

2. A rectangular-shaped garden is 22 m long and 12 m wide.

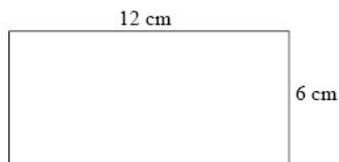
(a) How long is the fence around it if the gate is 2 m wide?

(b) What is the area of the garden?

3. If a square has the same total distance around the edge as the rectangle shown below, what would be the area of the square?



4. How many rectangles of length 4 cm by 2 cm will be cover the large rectangle shown below, without overlapping?



7.2 Topic 2 — Measurement (Area)

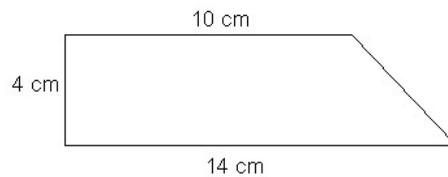
1. How many square tiles with sides 10 cm are required to cover an area of $10,000 \text{ cm}^2$?

2. A triangle with a base of 12 cm has an altitude of 6.8 cm. Find the area of the triangle.

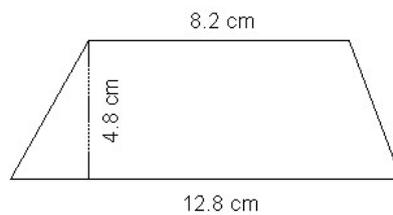
3. A carpet is placed on the floor of a room 6 m by 5 m leaving a border $\frac{1}{2}$ m wide all round it. What is the perimeter of the carpet?

4. Find the area of the following shapes:

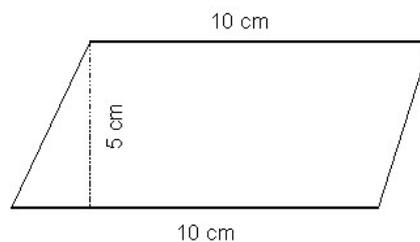
(a) Area: _____



(b) Area: _____



(c) Area: _____



7.3 Topic 3 — Measurement (Volume)

1. Sally poured 2 thirds of a litre of fruit juice equally into 4 cups. How much fruit juice was in each cup?

2. An 80 cm by 60 cm rectangular tank contained 48 L of water. What is the height of the water level?

3. A tank in the shape of a cube with sides measuring 40 cm is filled with $12\frac{1}{2}$ litres of water. How many more litres of water is required to fill it up?

4. What must be the height of a tank in order that it can hold 9.6 litres of water if its base area is 500 square centimetres?

5. A rectangular container of length 50 cm and width 40 cm contains 20 litres of water. Find the height of the water level.

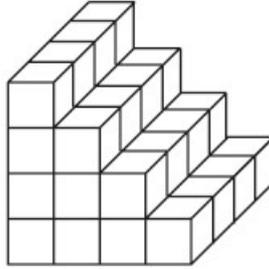
6. A rectangular block of wood is 24 cm by 20 cm by 12 cm. It is cut into 90 equal cubes. What is the area of each face of the small cubes?

7. Philip bought half a dozen 1.5 L bottles of fresh juice for a party. He poured all the juice into 150 ml cups. How many 150 ml cups would he need to hold the juice?

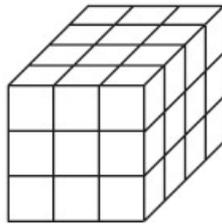
7.4 Topic 4 — Measurement(Surface Area)

1. The solids are made from 1 cm cubes. calculate their surface area and volume:

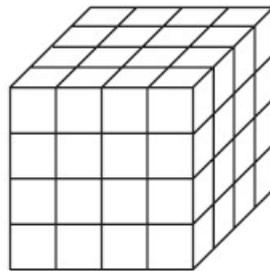
(a) Volume: _____ cm^3 , Area: _____ cm^2



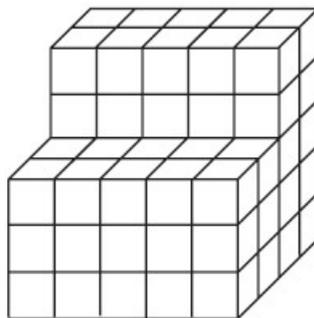
(b) Volume: _____ cm^3 , Area: _____ cm^2



(c) Volume: _____ cm^3 , Area: _____ cm^2

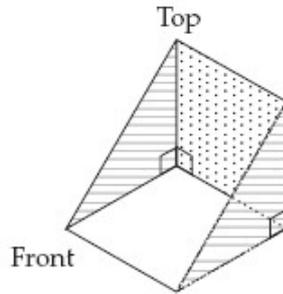


(d) Volume: _____ cm^3 , Area: _____ cm^2

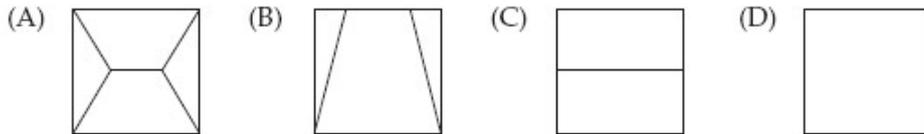


7.5 Problem Solving (3-D Figures)

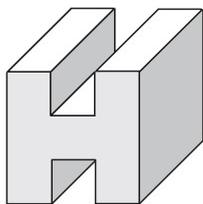
1. The figure shows an open tray in the shape of a triangular prism as shown below:



Which diagram is the top view of the tray?



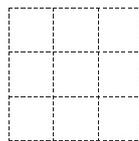
2. The solid shown below was cut from a cube with edges 3 units long. Draw how you would see it from the front, from the side and from above. Calculate its volume and surface area.



Front view

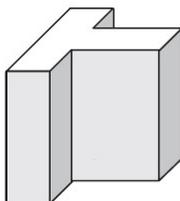
Side view

Top view



Volume: _____ cm^3 , Area: _____ cm^2

3. The solid shown below was cut from a cube with edges 3 units long. Draw how you would see it from the front, from the side and from above. Calculate its volume and surface area.



Front view

Side view

Top view



Volume: _____ cm^3 , Area: _____ cm^2

7.6 Test Paper 7**7.6.1 Part A — 10 Multiple Choice Questions (1 mark each)**

- Which of the following will simplify to 3?
(A) $\sqrt{5^2 - 4^2}$ (B) $26 - 6 \times 4$ (C) 1.5^2 (D) $24 \div 6 \times 2$
- Which of the following will simplify to 120?
(A) 60×20 (B) $1200 \div 1000$ (C) $2.4 \div 0.02$ (D) $\frac{30}{\frac{1}{3}}$
- 123×25 mistaken for 123×27 . By how much was the answer too large by?
(A) 123 (B) 246 (C) 26 (D) 27
- 985×31 mistaken for 987×31 . By how much was the answer too small by?
(A) 31 (B) 1 (C) 2 (D) 62
- Which is the next angle in the series? $45^\circ, 135^\circ, 225^\circ, \dots$
(A) 275° (B) 295° (C) 305° (D) 315°
- What is the next number in the series? 118, 226, 334, . . .
(A) 444 (B) 442 (C) 550 (D) 440
- Which of the following has the least volume?
(A) A 1-litre bottle (B) A pail that can hold 825 cm^3 of water
(C) A cube of sides 9 cm (D) A rectangular box 12 cm by 10 cm by 8 cm
- $4 : \boxed{?} = 96 : 216$. Find the missing number in the box.
(A) 8 (B) 9 (C) 12 (D) 24
- The perimeter of a square tiles is 164 cm. Find its area.
(A) 82 (B) 328 cm^2 (C) 1681 cm^2 (D) 1721 cm^2
- How many cubes of sides 3 cm can be put in a rectangular box that measures 24 cm by 18 cm by 12 cm?
(A) 192 (B) 864 (C) 1284 (D) 1728

7.6.2 Part B — 10 Average Questions (2 marks each)

1. The fraction $\frac{\boxed{?}}{5}$ has a value between 6 and 7. Give one possible whole number for $\boxed{?}$.

2. Write two numbers that have a sum of 19 and a product of 48.

3. What is the greatest number of 45 cents stamps that can be bought with \$30?

4. What is the remainder when 6739 is divided by 25?

5. How many fifths are there in $11\frac{8}{10}$?

6. Express 294 g as a fraction of 5 kg in its simplest form.

7. 2.5 kg of sugar cost \$1.50. If grandma bought 6 kg, how much did she pay?

8. 9 customers spent \$819. if each of them spent the same amount of money, how much did 6 of them spend?

9. There are 325 members in a golf club. 120 of them are females. What percentage of the members are males?

10. Find the value of $11\frac{1}{6} - 5\frac{7}{8} + \frac{2}{3}$.

7.6.3 Part C — 10 Extension Questions (3 marks each)

1. The perimeter of a rectangular floor is 9 m by 12 m. A piece of carpet is placed on the floor, leaving a border 1 m wide all round it. Find the cost of the carpet at \$45 per m^2 .

2. Three single squares are placed side by side to form a single rectangle whose perimeter is 64 cm. What is the area of each square?

3. The perimeter of an isosceles triangle is 40 cm. The length of its two equal sides is twice as long as its base. Find the length of the base of the triangle.

4. If the surface area of a cube is 600 cm^2 , what is its volume in centimetre cubes (cm^3)?

5. 20 children have an average of 9 lollipops. If 9 of them have an average of 10 lollipops, how many lollipops do the remaining children have altogether?

6. 24 children have an average of 10 lollipops. If 8 of them have an average of 12 lollipops, how many lollipops does each remaining children have?

7. The average temperature for five days, Monday to Friday, is 19° C. What is the average temperature from Wednesday to Friday if the temperature on the five days are consecutive numbers?

8. Steven and Dolly and their three children went to the movies. The children were charged half-price. If the total cost of the tickets was \$52.50, how much did each child ticket cost?

9. John built a fence to enclose his pet rabbits within a square pen. When he finished there were 7 fence poles on each side of the square. How many poles did he use altogether?

10. Mark fenced a rectangular area and used 26 poles, equally spaced. If he used 9 poles on a longer side of the rectangle, how many poles were on a shorter side?

7.6.4 Part D — 8 Challenging Questions (5 marks each)

1. A rectangular tank 50 cm long and 40 cm wide contains 20 litres of water. When a piece of brass is placed in the water, the height of the water becomes 15 cm. Find the volume of the brass piece in centimetre cubes (cm^3).

2. How many 2 L bottles of water are required to fill a rectangular tank 60 cm by 50 cm by 20 cm which already contains 28 litres of water?

3. If $\frac{3}{8}$ of a group of children like to eat oranges. Among these children, $\frac{1}{3}$ of them also like to eat mangoes. What fraction of the group like to eat both oranges and mangoes? (Give your answer in its simplest form)

4. Linda, Tony and Jane shared some marbles in the ratio 3 : 6 : 8 respectively. If Linda and Tony had 45 marbles altogether, how many marbles had Jane more than Linda?

5. A square photograph whose area is 144 cm^2 is surrounded by a border 1 cm wide. What is the area of the border?

6. Jane's average mark on last 5 spelling tests was 86. If her lowest mark was dropped, her average on the other 4 tests would be 88. What was Jane's lowest mark in those five tests?

7. A natural number N has a remainder of 2 when divided by 6 and also has a remainder of 3 when divided by 7. What is the smallest value N would be?

8. What is the greatest number of points of intersection that can occur when 2 different circles and three different straight lines are drawn on the same piece of paper?

