

Year 5 Term 3 Homework

Student Name: _____	Grade: _____
Date: _____	Score: _____

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This edition was printed on February 15, 2017.

Camera ready copy was prepared with the **LaTeX2e** typesetting system.

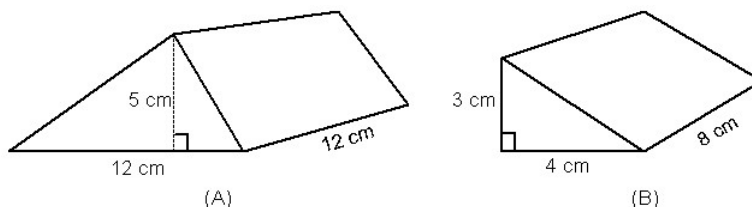
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2 Year 5 Term 3 Week 2 Homework

2.1 Topic 1 — Volume of Prisms

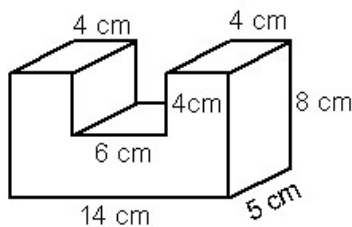
- A prism has two bases (a top and a base) and they are of the same shape and size. The distance between these two bases is called the height of the prism. The area of the base is called the cross-sectional area.
- The volume of any prism can be found by calculating the area of the base and multiplying it by the height of the prism.
- $V = A \times h$ where **A** is the area of the base and h is the height of the prism.

1. Find the volumes of the following triangular prisms:



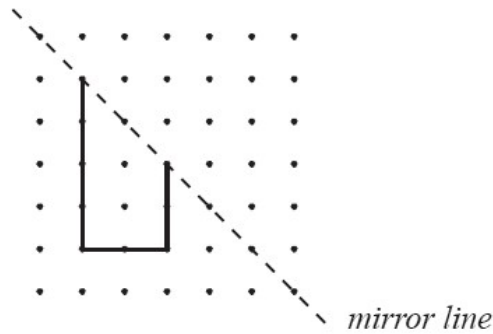
(A) : _____ , (B) : _____

2. Find the volume of the following prism:

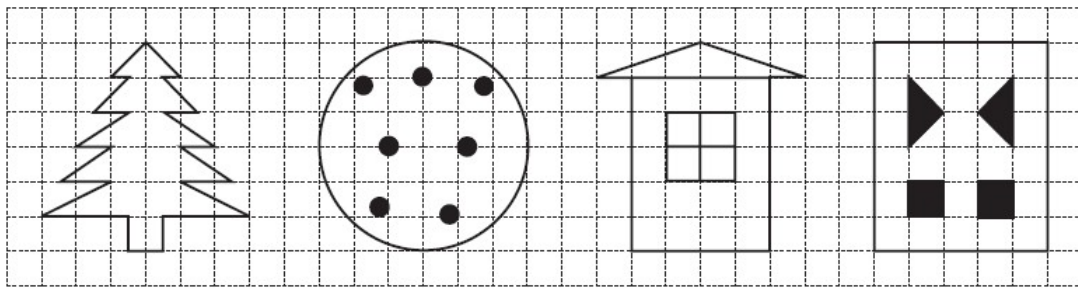


2.2 Topic 2 — 3-D & 2-D Figures

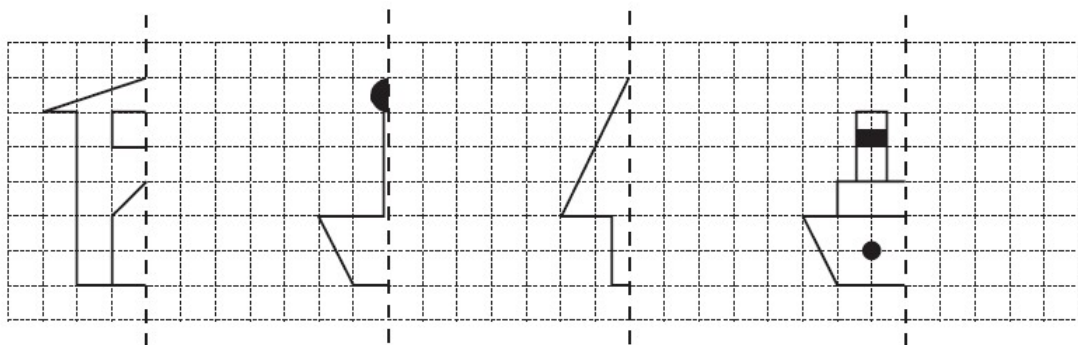
1. Use a ruler to draw the reflection of this shape in the mirror line.



2. Draw the reflection for each diagram which has reflective symmetry:



3. Draw the reflection of each shape in its mirror line:



4. Write the name of a solid if it has two triangular faces and three flat faces.

5. Write the name of a solid that does not have any flat faces.

2.3 Topic 3 — Mass

1. Convert the following units:

(a) $2345 \text{ g} = \text{_____ kg.}$

(b) $456000 \text{ kg} = \text{_____ tonnes.}$

(c) $567 \text{ g} = \text{_____ kg.}$

(d) $0.1234 \text{ kg} = \text{_____ g.}$

(e) $1.25 \text{ tonne} = \text{_____ kg.}$

2. There are 8 members in a family and the average mass is 48.5 kg. What is the total mass?

3. Find the net mass (mass of the contents) if the gross mass (total mass) of a packet is 1015 g and the container's mass is 105 g.

4. There are 8 cans of fruit salad and the total weight is 10.8 kg. The mass of an empty can is 25 grams. Find the net mass of each can.

5. A truck and its load have a mass of 18 tonnes and 820 kilograms. The mass of the truck is $\frac{1}{4}$ of this. What is the mass of the load?

6. Three boxes have a mass of 3kg 450 g each and five others are of mass 2 kg 520 g each. What is the mass of these eight boxes?

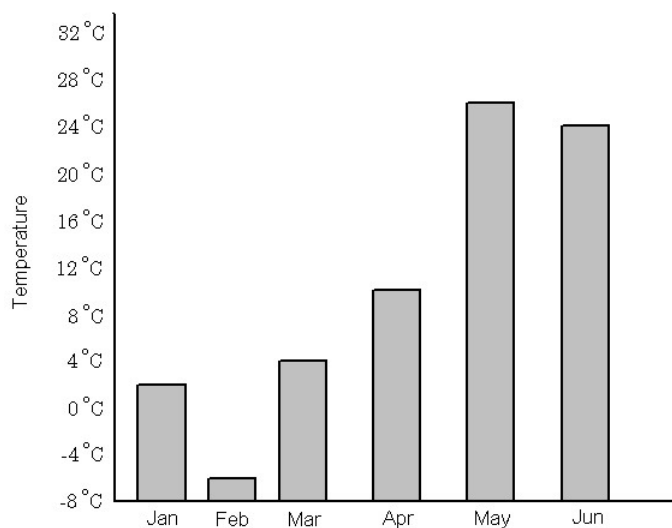
2.4 Topic 4 — Temperature

1. Today’s temperature is 21°C . Tomorrow it is going to be 6°C higher. What will be the temperature tomorrow?

2. The temperature in the morning was 18°C . As the day progressed it rose by 8°C in the noon and then dropped 6°C in the evening. What was the temperature then?

3. Find the difference between -32°C and -17°C .

4. The graph below shows the average monthly temperature in a city from January to June. Answer the following questions:



(a) What was the average monthly temperature for these six months?

(b) Which month was the hottest month?

(c) During which month the average was 24°C ?

2.5 Problem Solving (Motion Problems)

Distance = Speed \times Time : $d = s \times t$

Average speed (S) = Total Distance (D) \div Total Time (T) : $S = \frac{D}{T}$

1. Two trains leave from the same station at the same time, but in opposite directions. One train averages 68 km/h and other averages 72 km/h.

(a) How far apart will the trains be at the end of two hours?

(b) How much time will it take for the trains to be 504 km apart?

(c) How far apart will the trains be at the end of three hours if two trains travel in the same direction?

2. Racing their bicycles, David and William leave from two different places at the same time and ride directly toward each other. David rides at 6.5 km/h and William rides at 7.5 km/h. If they meet in 45 minutes, how far apart were when they started?

3. A train that is one kilometre long is travelling at 60 km/h. If the train enters a tunnel that is two kilometres long, how much time will it take the train to clear the tunnel?

2.6 Test Paper 2

2.6.1 Part A — 10 Multiple Choice Questions (1 mark each)

- Twice the sum of 4 and 12 is divided by 4. The result is:
(A) 8 (B) $3\frac{1}{4}$ (C) 4 (D) $4\frac{2}{3}$
- Find the sum of 5% of 6 m and 12% of 5 m.
(A) 0.9 m (B) 82 cm (C) 92 cm (D) 0.94 m
- $\frac{3}{5}$ of 75 is the same as $\frac{3}{4}$ of :
(A) 54 (B) 60 (C) 76 (D) 80
- Divide 2.1 by $\frac{3}{5}$ the result is:
(A) 0.35 (B) 3.5 (C) 1.25 (D) 3.25
- What number must be placed in the box in order to make the number statement true?
 $\boxed{?} \times 0.003 = 900$
(A) 30,000 (B) 300,000 (C) 3,000 (D) 3,000,000
- What number would most likely complete the pattern: 5, 10, 17, 26, _____ .
(A) 37 (B) 42 (C) 35 (D) 46
- Express 0.2×0.6 as a percentage.
(A) 1.2% (B) 12% (C) 120% (D) 0.12%
- Express 45 as a fraction of 1350:
(A) $\frac{1}{30}$ (B) $\frac{1}{300}$ (C) $\frac{3}{10}$ (D) $\frac{3}{100}$
- What percentage of 1.5 km is 120 m?
(A) 80% (B) 8% (C) 18% (D) 12.5%
- Handkerchiefs are sold in bundles. Which is the best value?
(A) 3 for \$8.20 (B) 6 for \$15.40 (C) 8 for \$21.30 (D) 12 for \$32.50

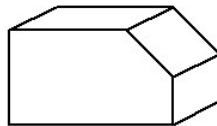
2.6.2 Part B — 10 Average Questions (2 marks each)

1. The surface area of a rectangular prism is 76 cm^2 . If two of the sides of the prism are 5cm and 2 cm, find the third side of the prism.

2. A packet of cooking salt weights 500g. How many of these packets would weight half a tonne?

3. What shape am I? I have 5 faces, 4 of which are triangles and the other one is a rectangle.

4. Find the sum of the number of vertices, the number of faces and the number of edges for the solid shown below:



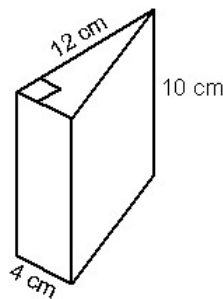
5. A equilateral triangle has sides of 24 cm. What is the length of the side of the square whose perimeter is the same as that of the triangle?

6. The temperature inside the house is 21°C and outside is -2°C . What is the difference in temperature?

7. Find the most likely number needed to complete the following pattern? 3, 7, 16, 32, 57, _____ .

8. The price of a novel is \$9.95. Tony wants to buy 8 of these novels with two \$50 notes. How much change will he receive?

9. Find the volume of the triangular prism.



10. A particular brand of dress is sold at 4 for \$75 during a half-year sale. With \$420 what is the greatest number of these dresses that you can buy?

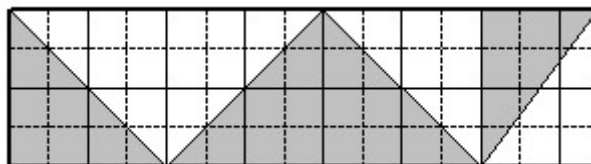
2.6.3 Part C — 10 Extension Questions (3 marks each)

1. A tank is $\frac{5}{12}$ full. If 40 L of water is needed to make it half full, what is the capacity of the tank?

2. A man left home and drove along a certain road at 52km/h. One hour later his son left home and drove along the same road in the same direction at 78 km/h. How long does the son need to overtake his father?

3. In a set of five numbers, the average of the first two is 20 and the average of the last three is 16. Find the average of all the five numbers.

4. What percentage of the figure is shaded?



5. What same number should be placed in each box to make the following statement true?

$$\boxed{?} \times 7 + 12 \times \boxed{?} = 247$$

6. If 25% of a sum of money is \$625, what is 15% of the sum of money?

7. A boy cycled at the speed of 10 km/h for 30 minutes. Then he walked at the rate of 4 km/h for one and a half hours. What is his average speed for this trip?

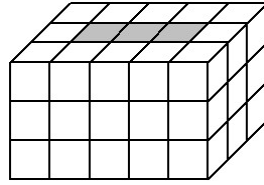
8. Seven years ago a man was twice as old as his brother. If his brother is now 15 years old, how old is the man?

9. A freight train travels 2 km in 1 minute and 20 seconds. At this rate, how many kilometres will the train travel in one hour?

10. Of three numbers, two are $\frac{1}{3}$ and $\frac{1}{4}$. What should the third number so that the average of all three numbers is $\frac{1}{2}$?

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

1. In the sketch shown below, a number of cubes each side 1 cm, the cubes with the face shaded and the ones directly below it are removed.



- (a) Find the surface area of the remaining solid, in cm^2

- (b) Find the volume of the remaining solid, in cm^3 .

2. Two cars leave at the same time from two towns that are 252 km apart. They travel toward each other on the same highway, one car at 85 km/h and other at 95 km/h.

- (a) When will they meet each other?

- (b) What is the difference in distance they have covered when they meet?

3. A certain natural number is divisible by 4 and also by 5. When the number is divided by 6, the remainder is 4. What is the smallest number that satisfies these conditions?

4. The digits of a two-digit number are interchanged to form a new two-digit number. The difference of the original number and the new number is 54. Find the largest two-digit number which satisfies this condition.

5. What is the smallest possible natural number that has a remainder of 1 when divided by 2, 3, 4, 5, or 6 but which can be divided by 7 exactly?

6. We have 80 books altogether. They are arranged on 3 shelves. If we moved 7 books from the top shelf to the middle shelf and took 8 books away from the bottom shelf, there would be an equal number of books on each shelf. How many books are on each shelf?

7. What is the largest possible, 3-digit, positive integer which fulfils these conditions?

- If it is multiplied by 3, the result is also a 3-digit number.
- If it multiplied by 4, the result is a 4-digit number.

8. In a school the ratio of girls and boys in Year 5 is 7 : 5. There are 24 more girls than boys in Year 5. How many pupils are in Year 5?
