

Year 5 Term 3 Homework

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

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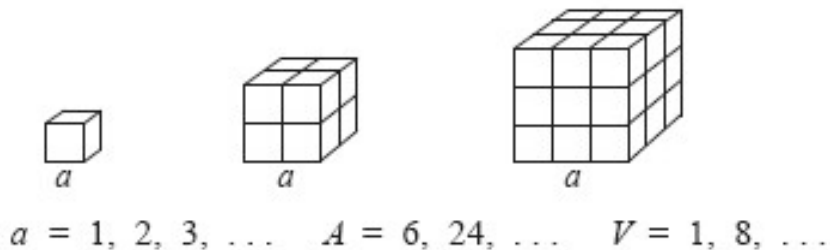
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1 Year 5 Term 3 Week 1 Homework

1.1 Topic 1 — Volume of Prisms

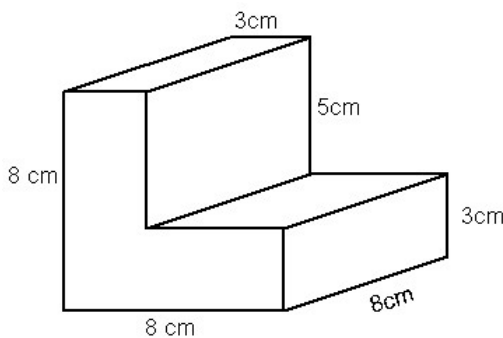
1. Continue the sequence for a, A and V for the diagram shown below:



$a = 1, 2, 3, \underline{\hspace{2cm}}, \underline{\hspace{2cm}}, 6$
 $A = 6, 24, \underline{\hspace{2cm}}, \underline{\hspace{2cm}}, \underline{\hspace{2cm}}, \underline{\hspace{2cm}}$
 $V = 1, 8, \underline{\hspace{2cm}}, \underline{\hspace{2cm}}, \underline{\hspace{2cm}}, \underline{\hspace{2cm}}$

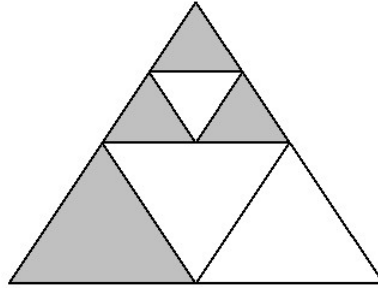
2. A tank is $\frac{5}{12}$ full. If 60 L of water is needed to make it half full, What is the capacity of the tank?

3. Find the volume of the figure shown below:



1.2 Topic 2 — 3-D & 2-D Figures

1. What fraction of the whole figure is shaded?

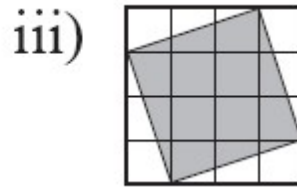
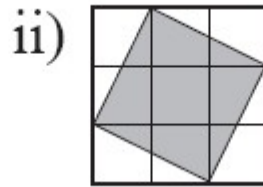
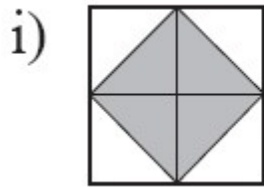


2. What fraction of each square is shaded?

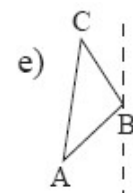
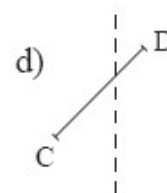
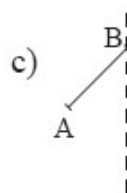
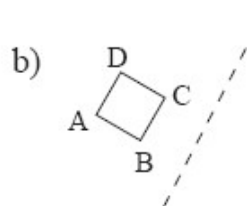
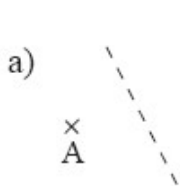
i). _____

ii). _____

iii). _____



3. Draw the mirror image of each shape and label the corresponding points.



1.3 Topic 3 — Mass

Table of Units of Mass: **1 tonne = 1000 kg; 1 kg = 1000 g; 1 g = 1000 mg (milligrams)**

1. A packet of sugar weighs 800 g. How many of these packets would weigh half a tonne?

2. There are five members in a family and their average mass is 54.6 kg. What is the total mass?

3. A truck and its load have a mass of 25 tonnes 750 kilograms. The mass of the truck is one-fifth of this mass. What is the mass of the load?

4. The following grocery items were bought at Coles. A 1.5 kg bag of sugar, a 500 g packet of tea, a 750 g tin of coffee, 4.5 kg of chicken pieces, 3750 g of dry fruit and two 1.5 litres of spring water (each empty bottle has a mass of 100 g). What is the total mass of these items?

5. Find the mass of a container if its gross mass is 3.75 kg and the net mass is 3630 g.

6. Find 0.25 of 5 kg.

1.4 Topic 4 — Temperature

The unit of temperature is the degree Celsius, symbol $^{\circ}C$. The Celsius temperature scale has been designed so that water freezes at $0^{\circ}C$ and water boils at $100^{\circ}C$. It is possible to have temperature below $0^{\circ}C$. The lowest possible temperature is $-273^{\circ}C$.

1. The temperature at 8 a.m. was $13^{\circ}C$. In the next two hours it rose $5^{\circ}C$ each hour. What was the temperature at 10 a.m.?

2. At 5 p.m. on the same day the temperature was $12^{\circ}C$. By midnight it had dropped $15^{\circ}C$. What was the temperature at midnight?

3. What would the temperature be if it was 12 degrees below freezing?

4. On last Sunday, the maximum temperature was $16^{\circ}C$ and the minimum was $-2^{\circ}C$ in the Campbelltown area. What was the fall in temperature that day?

5. David wants to raise the temperature of a liquid from $25^{\circ}C$ to the boiling temperature. By how much must he raise it?

1.5 Problem Solving (Number Problem)

1. The difference of two numbers is 33. The larger number is 9 more than five times the smaller number. What are the numbers?

2. One of two numbers is one-third of the other number. The sum of the numbers is 16. Find the numbers.

3. The sum of two numbers is 20. The difference of the same two numbers is 2. Find the numbers.

4. The sum of two numbers is 30. The larger number is five times the smaller number. What are the numbers?

5. Two times a number equals 27 less than five times the number. What is the number?

6. Four times the difference of 13 minus a number is 24. What is the number?

1.6 Test Paper 1**1.6.1 Part A — 10 Multiple Choice Questions (1 mark each)**

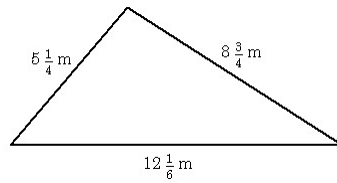
- Express 640 m as a decimal of 1.5 km.
(A) 0.325 (B) 0.425 (C) 0.426 (D) 0.426
- $1\frac{1}{3} \times 2\frac{2}{5} \div \frac{1}{6} = ?$
(A) $\frac{5}{96}$ (B) $15\frac{1}{5}$ (C) $19\frac{1}{5}$ (D) $\frac{8}{15}$
- If you toss two dice, which of the following is more likely?
(A) one 6 (B) at least one 6 (C) two 6s (D) all choices are equally likely
- Which one of the following gives the largest amount?
(A) 2% of 60 (B) 4% of 40 (C) 6% of 30 (D) 10% of 20
- 75 kg as a fraction of half a tonne is
(A) $\frac{2}{3}$ (B) $\frac{3}{2}$ (C) $\frac{20}{3}$ (D) $\frac{3}{20}$
- Which one of the following is less than one half?
(A) $\frac{7}{12}$ (B) 53% (C) 0.62 (D) $\frac{12}{25}$
- Each child in the Parker family has at least two brothers and one sister. What is the least number of children in the family?
(A) 4 (B) 5 (C) 6 (D) 7
- A laser printer prints 12 pages per minute. How long would it take to print 186 pages?
(A) 16 minutes (B) $12\frac{1}{2}$ minutes (C) 14 minutes (D) $15\frac{1}{2}$ minutes
- A square paddock has an area of 1 ha. What is the length of each side?
(A) 10 m (B) $33\frac{1}{3}$ m (C) 100 m (D) 1000 m
- What is the same number that should be placed in each box to make the following statement true?

$$\boxed{?} \times 9 + 5 \times \boxed{?} = 42$$

- (A) 1 (B) 2 (C) 3 (D) 4

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

1. Find the perimeter of the triangle.



2. Jane is 126 cm tall, her brother is $1\frac{1}{3}$ as tall as Jane. What is the sum of their heights?

3. Two numbers multiply to give 84 and add to give 19. Find the largest of the two numbers.

4. Given that $16^2 = 256$ and $16^3 = 4096$, find the surface area of the cube of size 0.16 m and the volume of the cube.

(a) Surface Area: _____

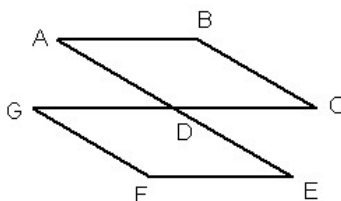
(b) Volume: _____

5. A car travels 465 km between 9:45 a.m. and 5:30 p.m.. What is the average speed in km/h?

6. 15 men on a desert island have enough food for four weeks. How many days should the same food last for 7 men?

7. Crystal has 150 marbles. Jane has 20% less marbles than Crystal. How many marbles do they have altogether?

8. How many lines of symmetry in the figure shown below if both ABCD and DEFG are rhombuses:



9. A car travels 1260 km in 6 days, how far will it travel in 9 days at the same rate?

10. A school ground is 150 m long and 80 m wide. Find the cost to fence it at \$15.80 per metre.

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

1. William is 15 years old. His brother is $\frac{2}{3}$ of his age. What will the sum of their ages be in five years time?

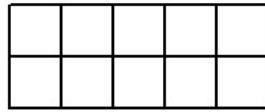
2. Bob finds the sum, difference, product and quotient of the numbers 27 and 9. He then adds all the numbers together including the original two numbers. What should his answer be?

3. The area of a certain triangle is $P \text{ cm}^2$. If each dimension is increased by three times, what is the area of the new triangle?

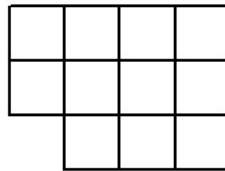
4. My house has a roof of about 25 m by 35 m. If 15 mm of rain fell on last night and all of the water ran off into a water tank, by how many litres will the contents of the tank increase?

5. What is the next number needed to complete the following pattern? 3, 7, 16, 32, 57, ?.

6. How many rectangles are there in the figure given below?



7. How many squares can you see in the figure shown below?



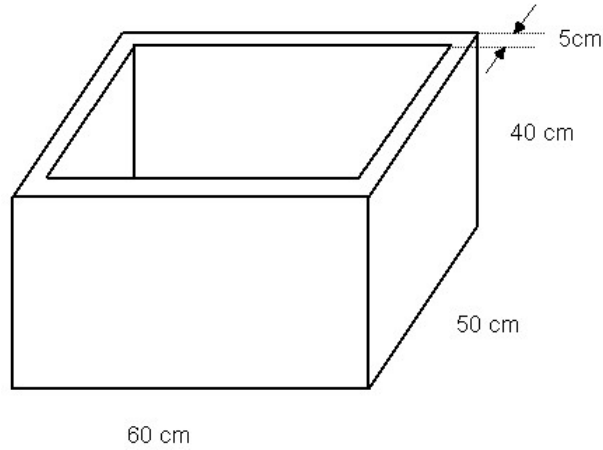
8. The difference of two numbers is 16. The large number is 8 more than three times the smaller number. What are the numbers?

9. One of two numbers is three-fifths of the other number. The sum of the numbers is 16. Find the numbers.

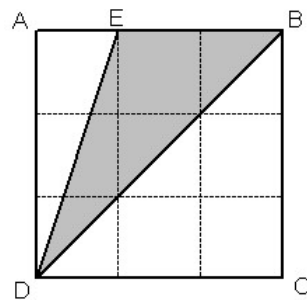
10. The sum of two numbers is 25. The difference of the same two numbers is seven. Find the numbers.

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

1. The outside dimensions of a opened rectangular empty wooden box are 60 cm by 50 cm by 40 cm. If the wood is 5cm thick, what is the capacity of the box?

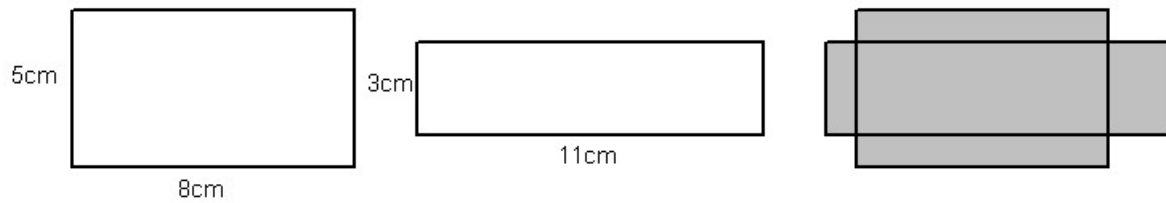


2. ABCD is a square which contains nine small congruent squares as shown below. The area of square ABCD is 81 cm^2 . Find the area of the shaded triangle BDE.



3. The first fifteen multiples of 4 are: 4, 8, 12, 16, .. 60. What is the sum of these multiples of 4?

4. The diagram shows two rectangles. The first rectangle is 5 cm by 8 cm. and the second one is 11 cm by 3 cm. Find the shaded area when two rectangles are glued together.



5. Suppose two days before yesterday was Friday. What day of the week will it be 50 days from today?

6. The sum $\frac{1}{5} + \frac{0.1}{5} + \frac{1}{0.5}$ is equal to decimal X.YZ where X, Y and Z may be the same or different digits. What number does X.YZ represent?

7. Tony bought apples at 30 for \$2.50 and sold all of them at 25 cents each. If he made a profit of \$150, how many apples did he sell?

8. Find the value of x in the diagram shown below:

