

## Year 5 Term 4 Homework

<b>Student Name:</b> _____	<b>Grade:</b> _____
<b>Date:</b> _____	<b>Score:</b> _____

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## 2 Year 5 Term 4 Week 2 Homework

### 2.1 Topic 1 — Area and Volume

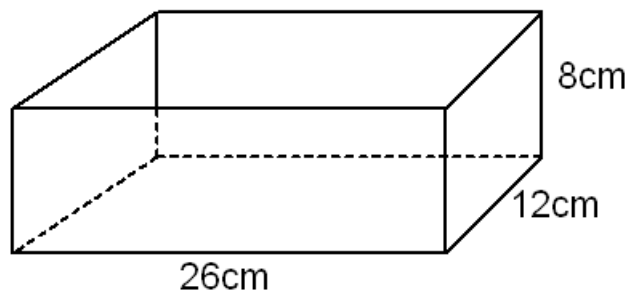
#### Summary of Volumes

- 1 kilolitre (kL) = 1000 Litres (L)
- 1 Litre (L) = 1000 millilitres (mL)
- 1000 cubic centimetres ( $cm^3$ ) = 1 Litre (L)

#### Exercise 2.1.1 Change the following to the units in brackets:

1.  $4.5 m^3 =$  \_\_\_\_\_ ( $cm^3$ )
2.  $52 Litres =$  \_\_\_\_\_ ( $cm^3$ )
3.  $12345 cm^3 =$  \_\_\_\_\_ (L)

#### Exercise 2.1.2 A rectangular container as shown below:



1. Find its volume.

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2. How much water in litres can it hold when it is 3 quarters full?

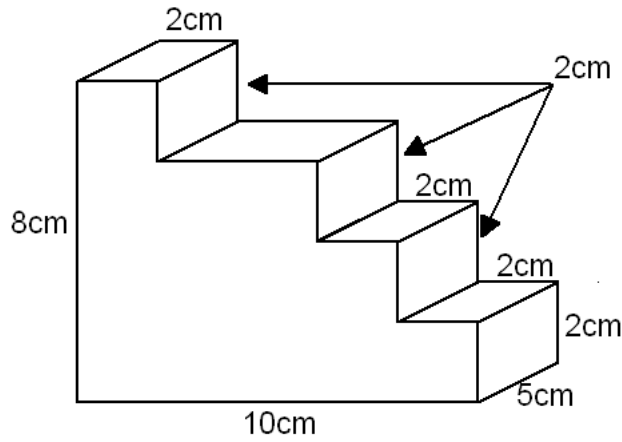
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**Exercise 2.1.3 Find the volume of each solid:**

1. Volume = \_\_\_\_\_



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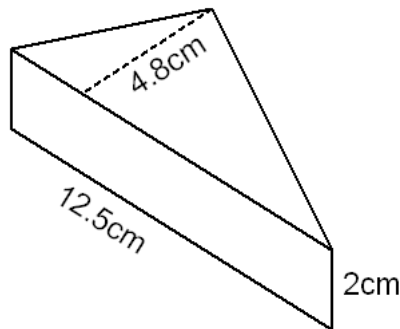
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2. Volume = \_\_\_\_\_



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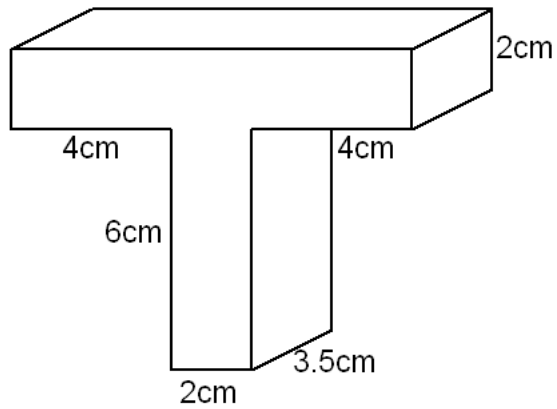
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**Exercise 2.1.4** Find the surface area and the volume of the figure shown below:



1. Surface area = \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. Volume = \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## 2.2 Topic 2 — Ratio

### Exercise 2.2.1

1. Which is the best buy on these apples?

(a) 5 apples for \$0.70

(b) 4 apples for \$0.64

(c) 10 apples for \$1.50

2. Potatoes are sold in three different bag sizes. Which represents the best value?

(a) 2 kg for \$3.44

(b) 6 kg for \$10.29

(c) 10 kg for \$17.10

3. If 5 kg of apples cost \$12.50, what is the cost of 12 kg?

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4. Richard has rabbits and chickens on his farm. How many rabbits are there altogether if there are 21 heads and 54 legs?

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5. A water tank is  $\frac{2}{5}$  full of water. It would take another 36 L to fill it up. What is the capacity of the water tank?

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6. The ratio of Tony's money to Ken's money is 7:3. Tony has \$320 more than Ken. How much money do they have altogether?

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## 2.3 Topic 3 — Rate

### Exercise 2.3.1

1. John received \$30 per hour for working a 35 hour week and is paid one-and-a-half for overtime. How much is he owed if he has worked 46 hours in the last week?

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2. 126 L of water was taken out of a water tank and 65% remains. What is the capacity of the water tank?

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3. A shadow of a building measures 15.6 m. At the same time a stick of 1.5 m casts a shadow of 90 cm long. How tall is the building?

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4. Martin scored the following marks in three consecutive maths tests:  $\frac{15}{20}$ ,  $\frac{17}{20}$ ,  $\frac{19}{20}$ . What was his average percentage?

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5. How long will it take to run 800 m if you can run at  $5\frac{1}{3}$  m in one second?

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## 2.4 Topic 4 — Percentages

### Exercise 2.4.1

1. Find the missing numbers

- (a) 24 out of 60 is \_\_\_\_\_ % .
- (b)  $12\text{ cm}^2$  is \_\_\_\_\_ % of  $75\text{ cm}^2$  .
- (c) 62.5% of \$800 is \_\_\_\_\_ .
- (d)  $18\text{ cm}^2$  is \_\_\_\_\_ % of  $60\text{ cm}^2$  .
- (e) 24.5 % of 48 hours is \_\_\_\_\_ hours.
- (f) 125 g of \_\_\_\_\_ g is 25%.
- (g) 625 mL is 25% of \_\_\_\_\_ mL.

2. A school consists of 750 students of which 393 are girls. What is the percentage of boys in the school?

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3. Helen’s Park is a field measuring 80 metres by 150 metres. If 75% of the field is grass, what is the area of the grass?

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4. 84000 electronic components are made and tested in a factory, 588 were found faulty. What percentage of the components were faulty?

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5. What is the percentage of one side of a square to its perimeter?

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## 2.5 Problem Solving (Working Backwards)

### Exercise 2.5.1

1. I spent  $\frac{1}{2}$  my money on exercise books and  $\frac{1}{3}$  of what remained on pencils. That left me with \$15. How much did I start shopping with?

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2. The marked price on an item was decided so as to gain 35% profit on the cost price. During a sale the marked price was reduced by 25% to \$20.25. What was the cost price?

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3. I went to a store and spent half of my money and then \$10 more. I went to another store and spent half of my remaining and then \$10 more. I now have \$50 left over. How much did I have when I went into the first store?

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4. Suppose I enter an elevator at a certain floor. Then the elevator moves up 7 floors, down 5 floors and up 3 floors again. I am then at floor 8. At which floor did I initially enter the elevator?

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**2.6 Test Paper 2****2.6.1 Part A****Exercise 2.6.1**

1. A packet of sweets weigh  $1\frac{1}{2}$  kg and a packet of salt weighs  $1\frac{3}{4}$ kg. What is the total weight of 4 packets of sweets and 3 packets of salt?

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2. Express 24 minutes as a ratio of 1 hour 48 minutes.

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3. The sum of 10 numbers is 1500. The average of 6 of them is 160. Find the average of the other 4 numbers.

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4. 25% of \_\_\_\_\_ = 175. Find the missing number.

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5. A machine can manufacture 175 packets of sweets in 25 minutes. How many packets of sweets can it manufacture in 12 minutes?

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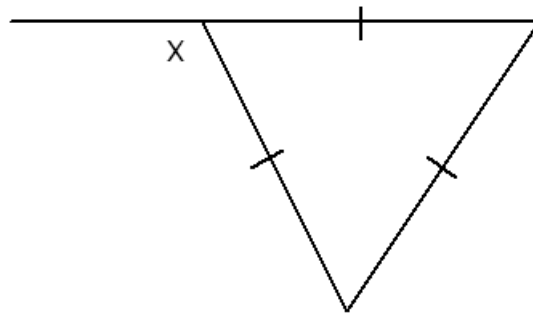
**2.6.2 Part B**

**Exercise 2.6.2**

1. What is the  $\angle x$  in the figure shown below?

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2. In a box, there are 28 red beads, 16 green beads and 20 yellow beads. Express the number of green beads as a fraction of the total number of red and yellow beads.

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3. The perimeter of a rectangle is 98 cm. The ratio of its breadth to its length is 1 : 6. What is the area of the rectangle in  $\text{cm}^2$  ?

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4. A water tank measures 70 cm by 50 cm by 35 cm. If it is 36% filled with water. How much more water is needed to fill up the tank?

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**2.6.3 Part C**

**Exercise 2.6.3**

1. The cost price of a bicycle was \$50 and the factory wished to gain a 12% profit on the marked price. Instead it was sold at a discount of 5%.

(a) How much was the marked price?

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(b) How much was the selling price?

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(c) How much loss will be made at a discount of 15%?

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2. After a price increase of 8%, a LCD TV cost \$3234.60. What did it cost before the increase?

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3. After a 12% discount, a CD player costs \$44, what was the original cost of the CD player?

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4. Charles bought a second hand bicycle for \$37.00 and fixed it. He then sold it to his neighbour 15% more than the cost price. What was the price he sold for the bicycle?

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**2.6.4 Part D**

**Exercise 2.6.4**

1. John has a Magic Money Box that will double any amount of money placed in it and add \$10 to the doubled amount. Yesterday John placed a certain amount of money into the box. The box then gave him a new amount. Today he placed those amounts back into the box. This time the box gave him a total of \$98. How much money did John first place in the Magic Money Box?

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2. Adam has 500 stamps. 25% of them are Chinese stamps, 40% of them are Japanese stamps and 60% of the remainder are HongKong stamps. The rest are Australian stamps. How many Australian stamps does he have?

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3. William and Tony have 900 stamps altogether. If William has 25% more than Tony, how many stamps does Tony have?

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4. After George spent 40% of his money, the amount of money he had left was \$65 more than the amount he had spent. How much money had George at first?

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5. After Lily spent 20% of her saving on a birthday present, she had \$320 left in her savings account. How much saving had Lily at first?

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6. 65% of the students in a school are boys. There are 330 fewer girls than boys. What is the enrolment of the school?

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**Exercise 2.6.5**

1. Two trees are planted in two holes each 48 cm deep. If  $\frac{1}{3}$  the total length of the first tree is in the hole and  $\frac{2}{5}$  of the second tree is in the hole, what is the difference between the height of the two trees?

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2. There were 98 passages upstairs on the ferry and 126 passengers downstairs. After an hour there the number of passengers on each stairs were the same. How many passengers went upstairs?

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3. The shop sold 48 computer games costing \$56 each. How much did the shopkeeper make if he paid \$39 per game to the manufacturers?

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4. Ten wheels each having a radius of 30.5 cm are touching each other. What is the distance between the centre of the first wheel and the centre of the last wheel in metres?

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**Exercise 2.6.6**

1. Out of a possible 300 marks, Jim scored 87%. How many extra marks would he have needed to scored 95%?

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2. If the middle two digits of 5829 were interchanged, the number would be made:  
A. Larger by 340      B. Smaller by 640.      C. Smaller by 540      D. Smaller by 54.

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3. Which decimal number is missing from this sequence? 4.9, 5.7, 6.5, 8.1  
A. 7.3      B. 5.4.      C. 6.1      D. 9.

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4. Joe commenced watching television at 5:45 p.m. He watched Freaky series for 15 minutes, news for  $\frac{1}{2}$  hour, the Simpsons for 20 minutes, Judging Amy for 50 minutes and then a video for 95 minutes before going to bed. At what time did he go to bed?  
A. 9:15 p.m.      B. 9:25 p.m.      C. 9:30 p.m.      D. 9.05 p.m.

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