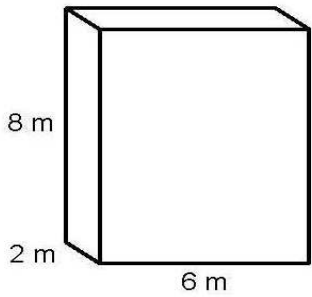


Name: \_\_\_\_\_ Class: \_\_\_\_\_ Number: \_\_\_\_\_ Date: \_\_\_\_\_

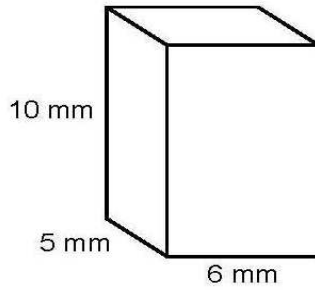
## Volume of simple cubes and cuboids

(1)



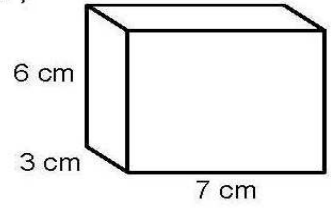
Volume: \_\_\_\_\_

(2)



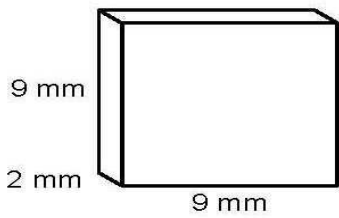
Volume: \_\_\_\_\_

(3)



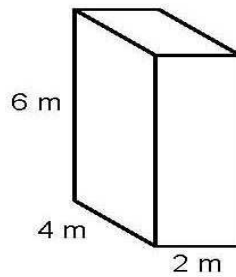
Volume: \_\_\_\_\_

(4)



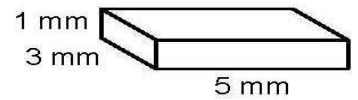
Volume: \_\_\_\_\_

(5)



Volume: \_\_\_\_\_

(6)

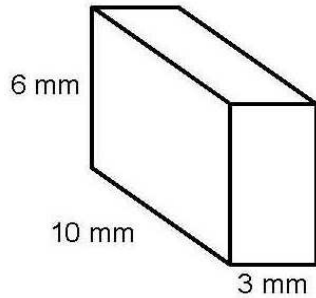


Volume: \_\_\_\_\_

## Volume of simple cubes and cuboids

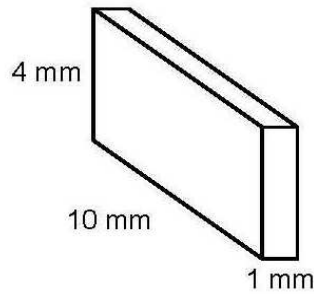
Calculate the volume of each solid.

(1)



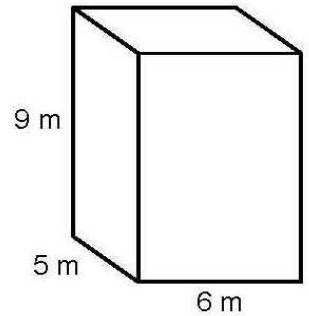
Volume: \_\_\_\_\_

(2)



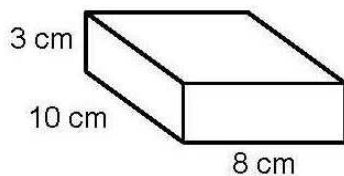
Volume: \_\_\_\_\_

(3)



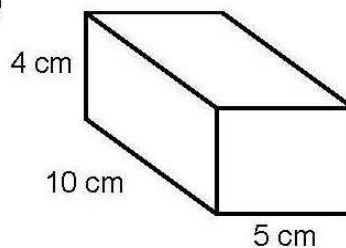
Volume: \_\_\_\_\_

(4)



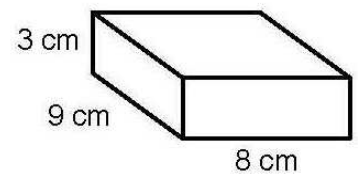
Volume: \_\_\_\_\_

(5)



Volume: \_\_\_\_\_

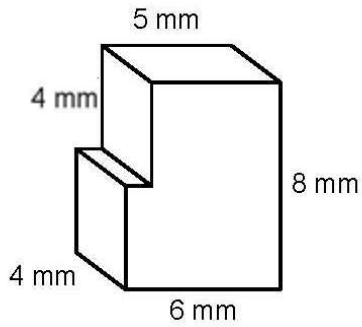
(6)



Volume: \_\_\_\_\_

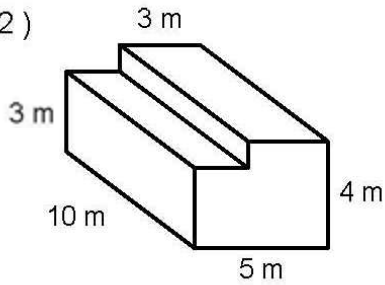
## Volume of simple and complex cubes and cuboids

(1)



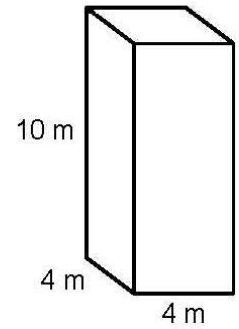
Volume: \_\_\_\_\_

(2)



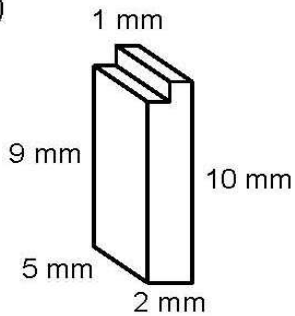
Volume: \_\_\_\_\_

(3)



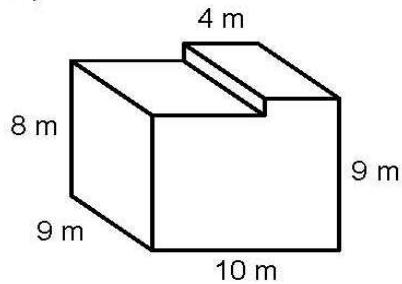
Volume: \_\_\_\_\_

(4)



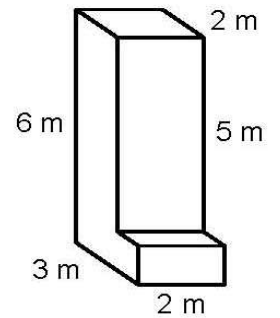
Volume: \_\_\_\_\_

(5)



Volume: \_\_\_\_\_

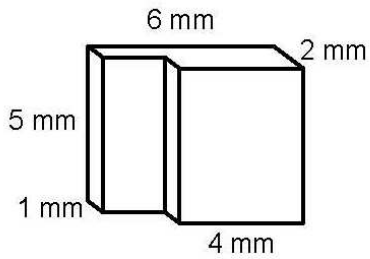
(6)



Volume: \_\_\_\_\_

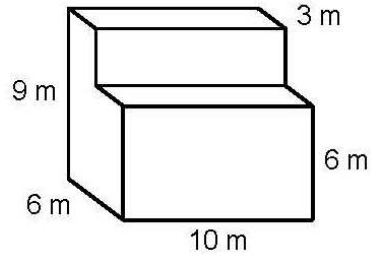
## Volume of simple and complex cubes and cuboids

(1)



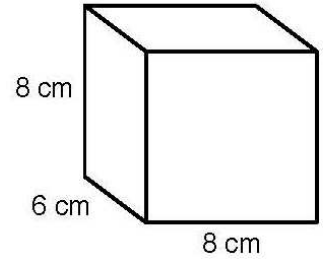
Volume: \_\_\_\_\_

(2)



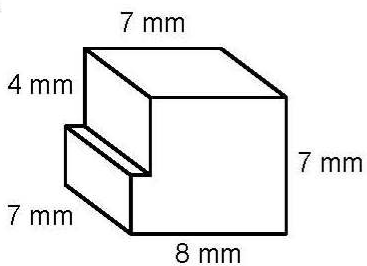
Volume: \_\_\_\_\_

(3)



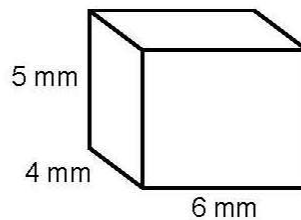
Volume: \_\_\_\_\_

(4)



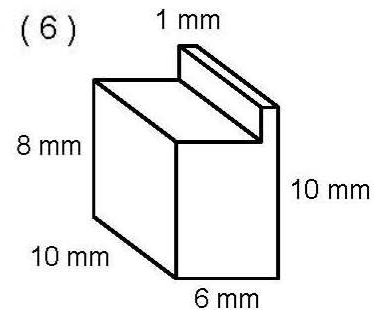
Volume: \_\_\_\_\_

(5)



Volume: \_\_\_\_\_

(6)

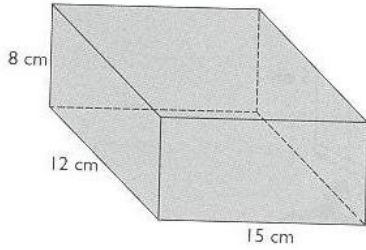


Volume: \_\_\_\_\_

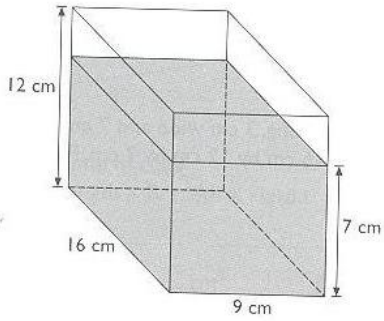
### Volume of Liquids

1. Find the volume of water in each of the following tanks. Give your answer in litres.

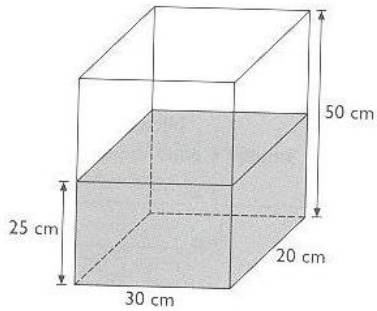
(a)



(b)



(c)



2. How much more water is needed to fill the above tanks? Answer in litres.

(a)

(b)

(c)

**3. What fraction of each tank from question 1 is filled with water?**

(a)

(b)

(c)

**4. A car's petrol tank measures 50cm by 60cm by 20cm.**

(a) How many litres of fuel can the petrol tank hold?

(b) If the tank can be filled at a rate of 0.2 L per second, how long will it take to fill the tank?

**5. A container measures 20cm by 15cm by 5cm.**

(a) It is one quarter full of water. How much water is in the container? Answer in millilitres.

(b) If it is leaking at a rate of 25 milliliters per second, how long will it take to empty the container?

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Number: \_\_\_\_\_ Date: \_\_\_\_\_

## Pie charts –Working with Fractions and Percentages

**In a pie chart, the fractions add up to 1.**

Remember : 1 can equal 12/12, or 3/3 or 100/100.

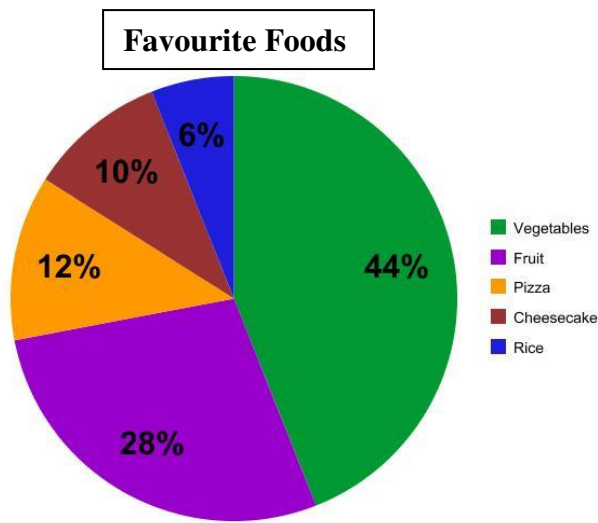
$\frac{2}{6} + \frac{1}{6} + \underline{\hspace{2cm}} = \frac{6}{6} = 1$	$1 - \frac{4}{7} - \frac{1}{7} = \underline{\hspace{2cm}}$
$\frac{4}{9} + \frac{1}{3} + \underline{\hspace{2cm}} = 1$	$1 - \frac{1}{5} - \frac{1}{3} = \underline{\hspace{2cm}}$
$\frac{1}{4} + \frac{1}{2} + \underline{\hspace{2cm}} = 1$	$1 - \frac{2}{9} - \frac{4}{9} = \underline{\hspace{2cm}}$
$\frac{3}{16} + \frac{3}{4} + \underline{\hspace{2cm}} = 1$	$1 - \frac{7}{20} - \frac{3}{10} = \underline{\hspace{2cm}}$

**In a pie chart, the segments add up to 100%.**

You can change a fraction to a percentage or find a percentage of a total.

<b>Changing a fraction to a percentage</b>  Multiply the fraction by 100/1. eg. $\frac{1}{4} = \frac{1}{4} \times \frac{100}{1} = \frac{100}{4} = 25\%$	<b>Finding a percentage of a number</b>  Divide the % by 100, then multiply it by the second number. eg. 4% of 50 = $\frac{4}{100} \times 50 = 2$
$\frac{16}{25} = \underline{\hspace{1cm}} \%$	3% of 200 = _____
$\frac{6}{15} = \underline{\hspace{1cm}} \%$	20% of 175 = _____
$\frac{3}{4} = \underline{\hspace{1cm}} \%$	45% of 400 = _____
$\frac{6}{20} = \underline{\hspace{1cm}} \%$	70% of 700 = _____

### Pie Charts with Percent



1. If there are 200 students, how many chose:

a) Vegetables \_\_\_\_\_

b) Cheesecake \_\_\_\_\_

c) Pizza \_\_\_\_\_

d) Fruit \_\_\_\_\_

e) Rice \_\_\_\_\_

2. If there are 300 students, how many chose:

a) Vegetables \_\_\_\_\_

b) Cheesecake \_\_\_\_\_

c) Pizza \_\_\_\_\_

d) Fruit \_\_\_\_\_

e) Rice \_\_\_\_\_

3. If there are 50 students, how many chose:

a) Vegetables \_\_\_\_\_

a) Cheesecake \_\_\_\_\_

b) Pizza \_\_\_\_\_

c) Fruit \_\_\_\_\_

d) Rice \_\_\_\_\_

4. If there are 1000 students, how many chose:

a) Vegetables \_\_\_\_\_

b) Cheesecake \_\_\_\_\_

c) Pizza \_\_\_\_\_

d) Fruit \_\_\_\_\_

e) Rice \_\_\_\_\_

5. If there are 800 students, how many chose:

a) Vegetables \_\_\_\_\_

b) Cheesecake \_\_\_\_\_

c) Pizza \_\_\_\_\_

d) Fruit \_\_\_\_\_

e) Rice \_\_\_\_\_



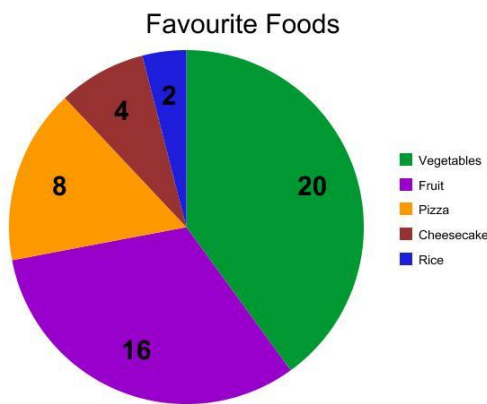
### Pie Charts with Quantities

**Question 1:** There are 150 students and 25 of them chose red as their favourite colour. What fraction chose red?

Answer: 25 out of a total of 150 chose red, so the fraction is  $\frac{25}{150}$ . This can be simplified to  $\frac{1}{6}$ .

**Question 2:** There are 150 students and 12 chose blue as their favourite colour. What percentage chose blue?

$$\frac{12}{150} \text{ changed to a percentage is } \frac{12}{150} \times \frac{100}{1} = \frac{12}{150} \times \frac{100}{1} = \frac{24}{3} = 8\%$$



1. How many students are there in total? \_\_\_\_\_

2. What fraction chose the following (simplify your answer):

a) Vegetables \_\_\_\_\_

b) Fruit \_\_\_\_\_

c) Pizza \_\_\_\_\_

d) Cheesecake \_\_\_\_\_

e) Rice \_\_\_\_\_

3. How many more students chose vegetables than:

a) Fruit \_\_\_\_\_

b) Pizza \_\_\_\_\_

c) Cheesecake \_\_\_\_\_

d) Rice \_\_\_\_\_

5. If there are 100 students altogether, how many chose:

a) Vegetables \_\_\_\_\_

b) Fruit \_\_\_\_\_

c) Pizza \_\_\_\_\_

d) Cheesecake \_\_\_\_\_

e) Rice \_\_\_\_\_

4. What percentage chose the following:

a) Vegetables \_\_\_\_\_

b) Fruit \_\_\_\_\_

c) Pizza \_\_\_\_\_

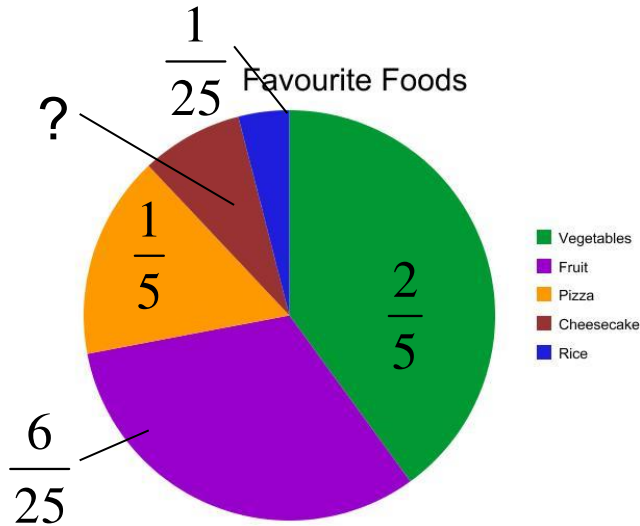
d) Cheesecake \_\_\_\_\_

e) Rice \_\_\_\_\_

### Pie Charts with Fractions

**Question 1:** There are 200 students and  $\frac{1}{50}$  chose red as their favourite colour. How many chose red?

Answer:  $\frac{1}{50}$  of 200 students is  $\frac{1}{50} \times 200 = \frac{1}{50} \times \frac{200}{1} = \frac{200}{50} = 4$  students



1. What fraction chose cheesecake? (hint: change all the fractions so they have the same denominator – the bottom number)

\_\_\_\_\_

2. If there are 50 students altogether, how many chose:

a) Vegetables \_\_\_\_\_

b) Fruit \_\_\_\_\_

c) Pizza \_\_\_\_\_

d) Cheesecake \_\_\_\_\_

e) Rice \_\_\_\_\_

3. If there are 25 students altogether, how many chose:

a) Vegetables \_\_\_\_\_

b) Fruit \_\_\_\_\_

c) Pizza \_\_\_\_\_

d) Cheesecake \_\_\_\_\_

e) Rice \_\_\_\_\_

5. If there are 100 students altogether, how many chose:

a) Vegetables \_\_\_\_\_

b) Fruit \_\_\_\_\_

c) Pizza \_\_\_\_\_

d) Cheesecake \_\_\_\_\_

e) Rice \_\_\_\_\_

4. If there are 2000 students altogether, how many chose:

a) Vegetables \_\_\_\_\_

b) Fruit \_\_\_\_\_

c) Pizza \_\_\_\_\_

d) Cheesecake \_\_\_\_\_

e) Rice \_\_\_\_\_