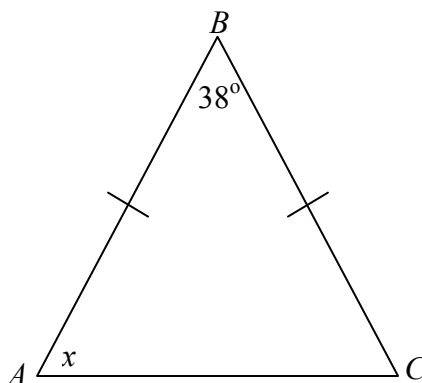


## REVISION SHEET 9

### CALCULATOR ALLOWED

1.
  - a) Calculate 68% of £56.
  - b) The total cost of 8 loaves and 9 cakes is £12.88. One loaf costs 62 pence. Find the cost of one cake.
  - c) What percentage of £560 is £108 ?

2. Find the angle marked  $x$ .



3. The favourite colours of each of 60 students was noted. The results were as follows.

Colour	Number of students
Red	15
Blue	20
Yellow	18
Green	7

Draw a pie chart to illustrate these results.

You should show how you calculate the angles of your pie chart.

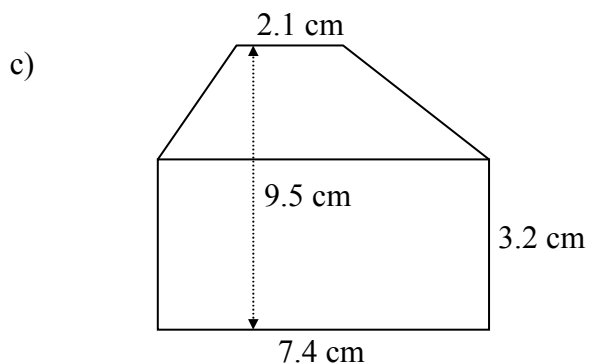
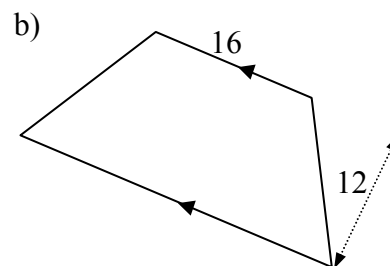
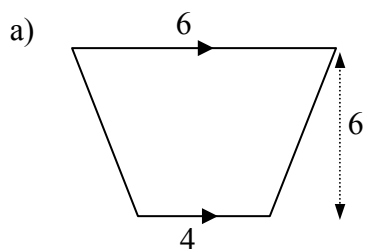
4. A certain type of coach can seat 50 people and a certain type of mini-bus can seat 20 people.  
A company has  $x$  of these coaches, each able to seat 50 people.
  - a) Write down, in terms of  $x$ , the total number of people which can be sat in these coaches.
  - b) The company has 5 more mini-buses than it does coaches.  
Write down, in terms of  $x$ , the number of mini-buses the company possesses.
  - c) Write down, in terms of  $x$ , the total number of people which can be sat in these mini-buses.
  - d) Write down, in terms of  $x$ , the total number of people which the company can seat in all of its' vehicles.
5. Calculate the average speed, in m.p.h., of a car that travels 156 miles in 3 hours 15 minutes.

6. A circular disc has diameter 36 mm.
- Calculate the circumference of the disc.
  - Calculate the area of the disc.
7.
  - Simplify  $3a^4b^2 \times 6a^3b$ .
  - Factorise  $4a^2 - 12ab$ .
8. Express the following numbers as products of prime numbers in index form.
- 441
  - 675.
9. Find to the nearest penny, the compound interest when £3000 is invested at 4% per annum for 3 years.
10. A biologist measures the heights of 90 shrubs to the nearest cm. The following table shows her results.

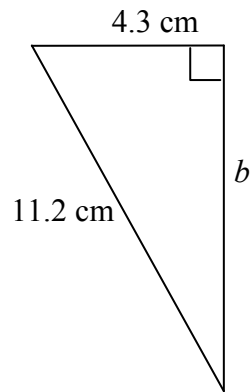
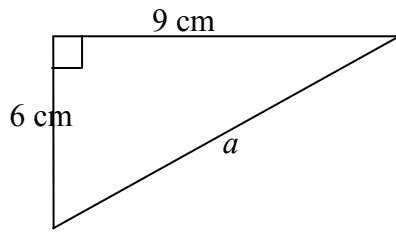
Height (to nearest cm)	1 to 5	6 to 10	11 to 15	16 to 20	21 to 30
Frequency	20	32	16	12	10

Calculate an estimate of the mean height of the shrubs in the sample.

11. A solution of the equation  $x^3 + 5x - 25 = 0$  lies between  $x = 2$  and  $x = 3$ . Use the method of trial and improvement to find this solution correct to one decimal place.
12. Write the following numbers in standard form:
- 340
  - 2.5
  - 0.0062.
13. Find, in standard form, the values of:
- $(8.1 \times 10^{-2}) \times (6.5 \times 10^{-4})$
  - $\frac{120168}{0.065}$ .
14. Find the areas of the following shapes.



15. Calculate the lengths of the sides labelled  $a$ ,  $b$  etc.

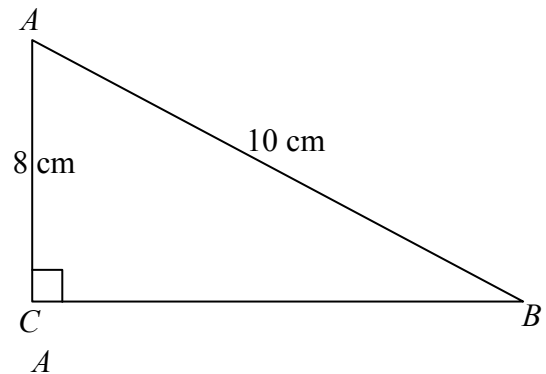


16. Solve the following simultaneous equations by an algebraic method. Show all your working.

a)  $3x - 5y = 34$   
 $5x + 3y = 0$

b)  $3x - 2y = 17$   
 $5x + 3y = 3.$

17. a) Calculate the size of angle  $ABC$ .



- b) Calculate the size of angle  $BAC$ .

