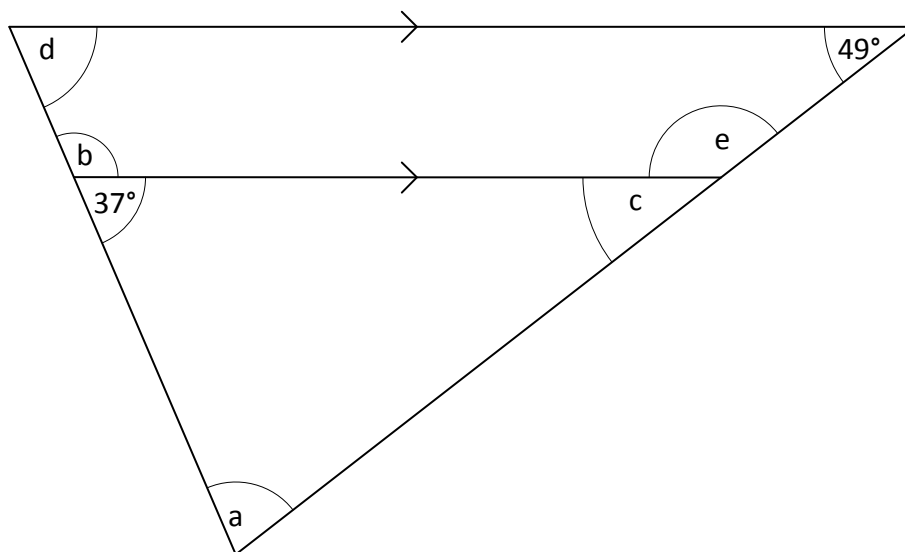


Year Nine Maths Revision

1. Work out the size of the missing angles in the diagram below:



Angle **a** = _____ because _____

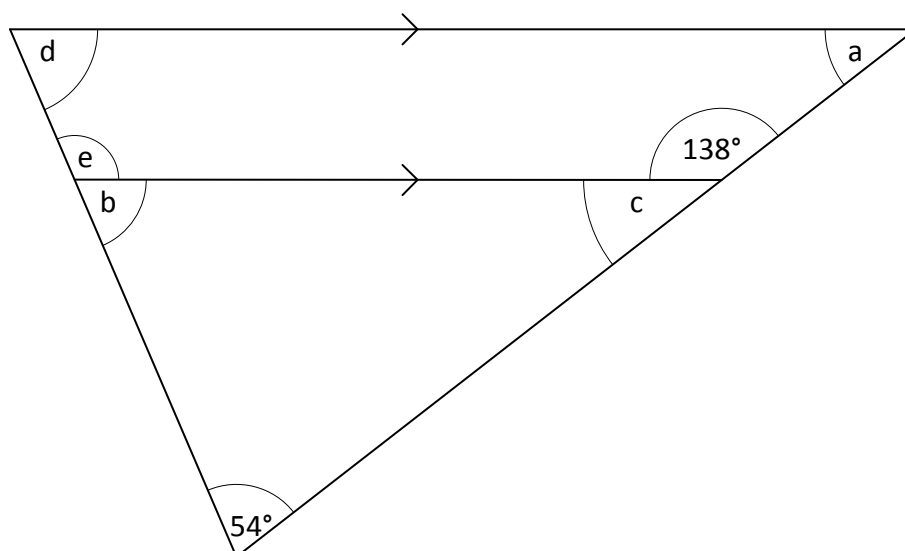
Angle **b** = _____ because _____

Angle **c** = _____ because _____

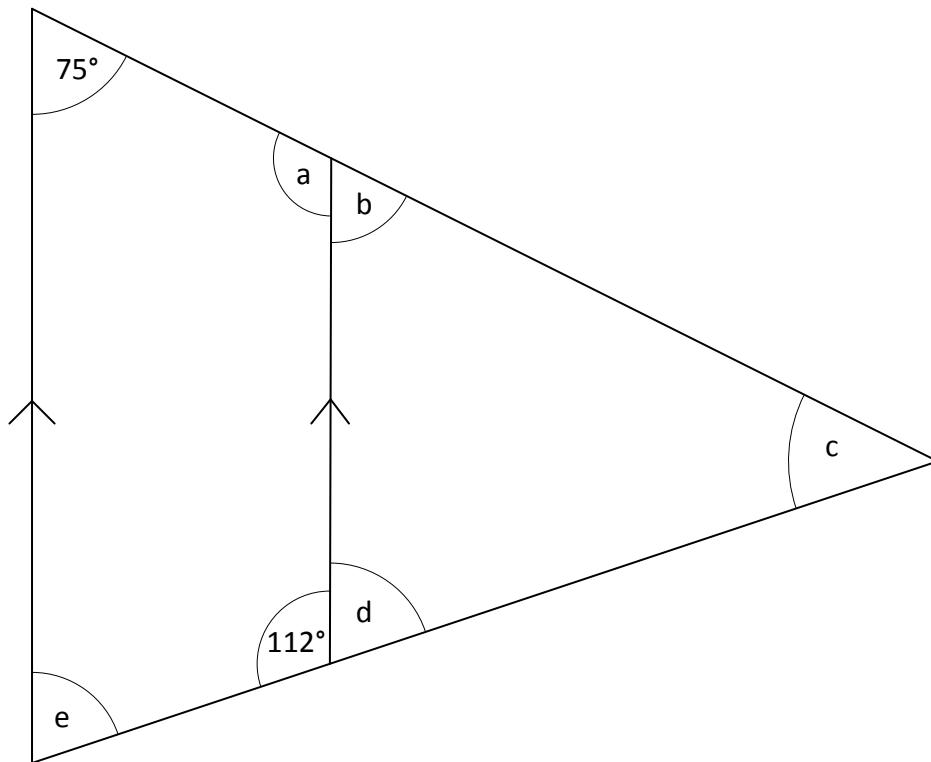
Angle **d** = _____ because _____

Angle **e** = _____ because _____

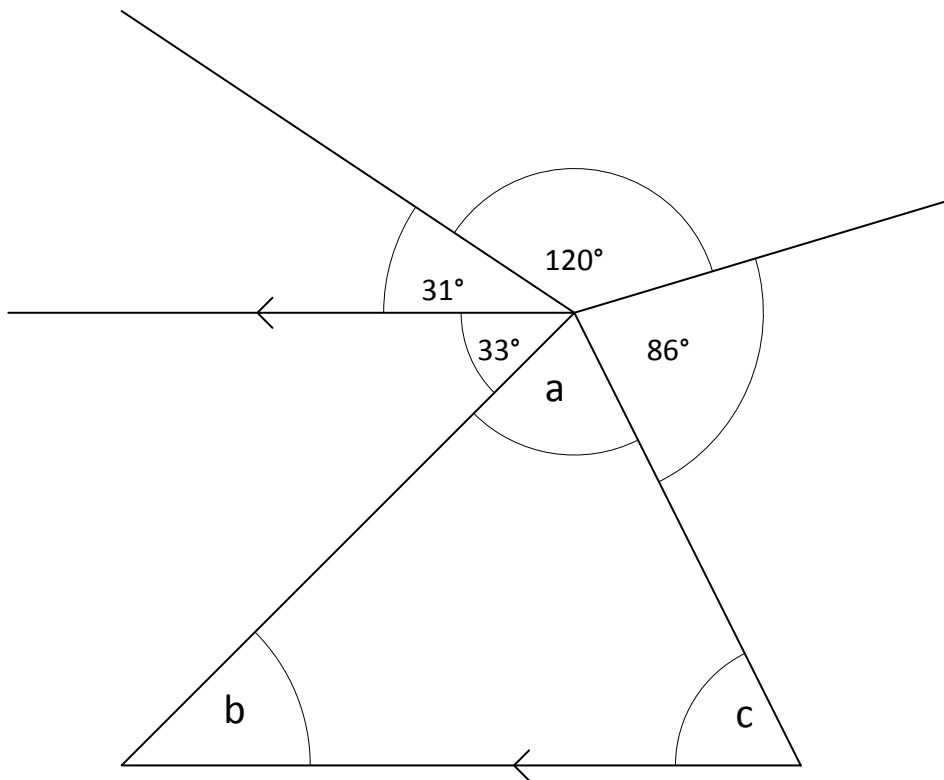
2. Work out the size of the missing angles. Use the same format for presenting your answers as in question 1.



3 Work out the size of the missing angles.



4 Calculate the size of the following angles.



5 Simplify the following expressions

a) $5h + 3h + h + h =$

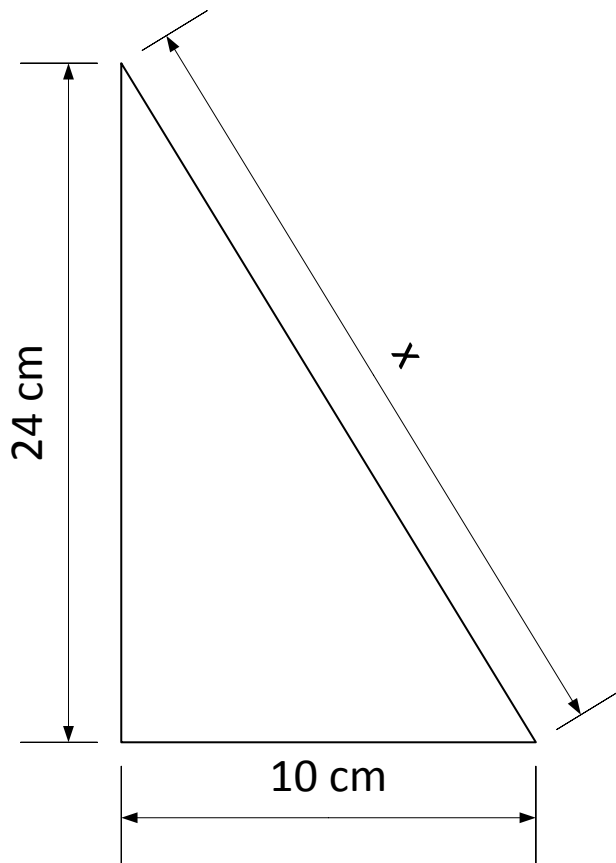
b) $t + 3t - 5t =$

c) $3r + 4t + 8r + 6t =$

d) $t^2 + 3t + 2t^2 + y =$

e) $u + 4u + 6y + 3x + 3x - 7y =$

6 Find the length of side x . Do not scale. You may use a calculator for the *final part* of this question.



7 What is the value of the 6 in the following numbers?

a) 3826

b) 6289

c) 2167

d) 1682

8 Evaluate:

a) $(3^2 + 4^2) - 12 =$

b) $5^3 - (6^2 + 7^2) =$

c) $9^2 - 8^2 + 7^2 =$

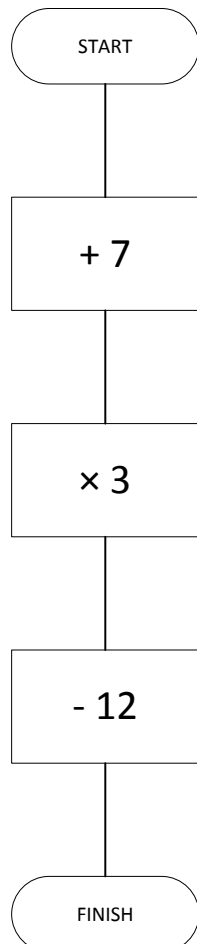
9 If $a=4$, $b=5$ and $c=2$, find the value of each of the following expressions:

a) $a + b + 2c =$

b) $3b - 2a =$

c) $5b + a^c =$

10 Below is a flow chart or an algorithm.



a) If I started with the number 10, with what number would I finish?

b) What number would I need to start with if I was to finish with the number 33?

c) What is the highest number I could start with and still get a negative number as my output?

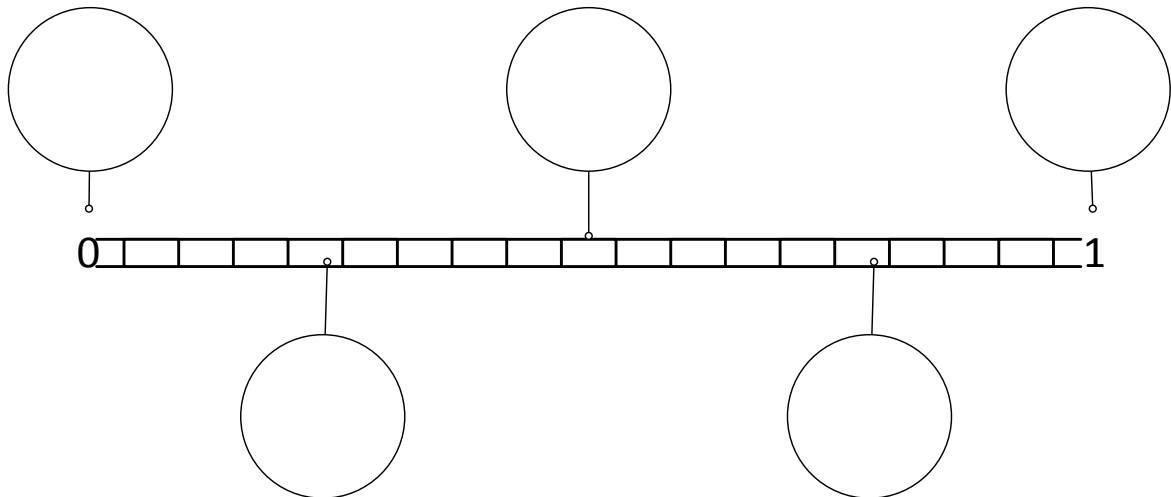
11 Look at the sequences of numbers below.

For each sequence:

- i. What are the next two numbers in the sequence?
- ii. What is the formula for that sequence?
- iii. What is the 100th term in that sequence?
- iv. What is the 1000th term in that sequence?

- a) 4, 7, 10, ...
- b) 19, 15, 11, 7, ...
- c) 37, 44, 51, ...
- d) 81, 74, 67, ...

12 Place the following words in the correct balloons to show the probability of something happening.



Certain, even chance, impossible, likely and unlikely

13 Saffah has a collection of CDs. Her collection consists of 3 pop CDs, 2 musicals CDs, four classical CDs and a book on CD.

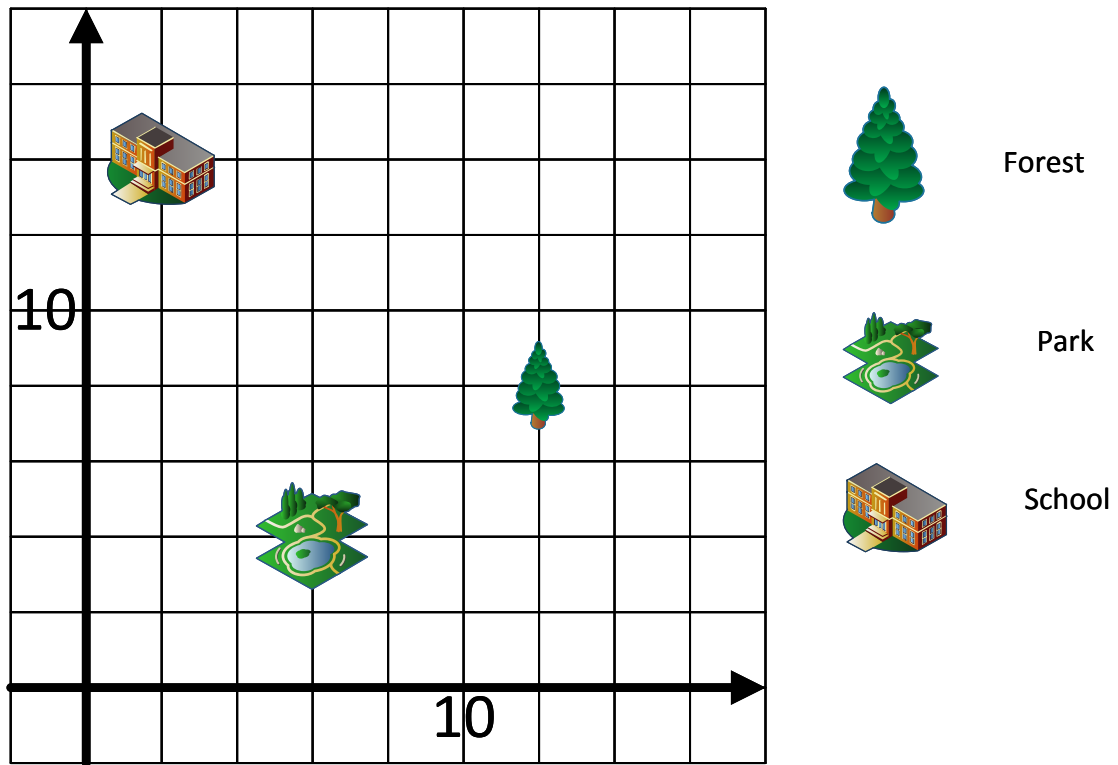
- a) What are the chances of her randomly picking a classical CD?
- b) What are the chances of her randomly picking a CD that is not classical music?
- c) What are the chances of her randomly choosing a book on CD?
- d) What are the chances of her picking a pop CD?

If she starts playing one of her pop CDs. Whilst it is playing, she selects another CD.

- e) What are the chances that this CD will be pop music?
- f) What are the chances that this CD will be her Book on a CD?
- g) What are the chances that this CD will not be classical music?

14

Below is a map.



- a) What are the co-ordinates of the school?
- b) What are the co-ordinates of the park?
- c) What are the co-ordinates of the forest?

15

Prove that if you add together two even numbers and multiply them by three, you always end up with an even number.