

## A Geometry: Triangle construction

Skill 6.9

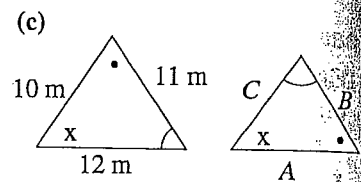
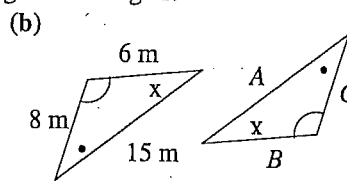
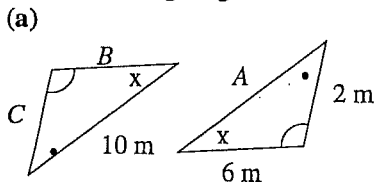
Draw a right angled triangle with side lengths of 6 cm, 8 cm and hypotenuse 10 cm.

- 1 Draw the perpendicular bisectors of each side to find the circumcentre and draw the circumcircle.
- 2 Draw the medians of the triangle to find the centroid.

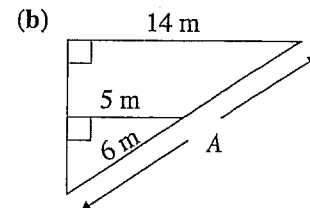
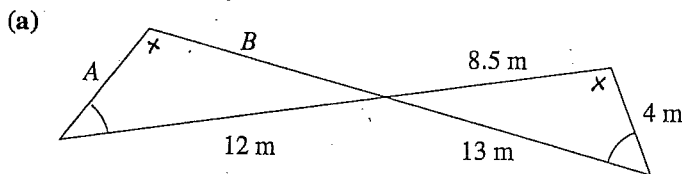
## B Measurement: Similar and congruent triangles

Skill 7.3

- 1 Find the missing lengths in these congruent triangles:



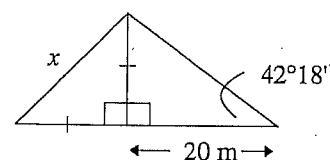
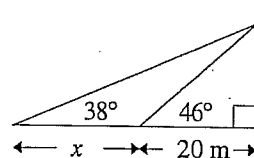
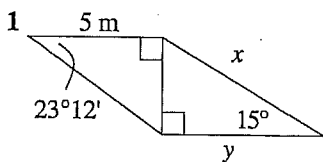
- 2 Find the missing lengths:



## C Trigonometry: Composite figures

Skill 8.7

Find the missing lengths in the following:



## D Trigonometry: Practical applications in two dimensions

Skill 8.8

- 1 A yacht travels for 10 km on the bearing  $E15^\circ N$  and then a further 15 km on the bearing  $E45^\circ N$ . Find:
  - (a) How far east it has travelled?
  - (b) How far north it has travelled?
  - (c) The straight line distance between where it finished and where it started.
- 2 A hiker standing 400 m from the base of a cliff sights the top of it and measures the angle of elevation at  $12^\circ 15'$ . Find the height of the cliff.

## E Chance and data: Measures of spread

Skill 9.3

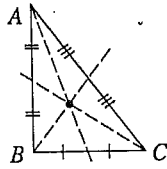
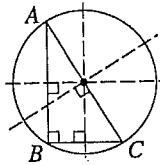
The following are a set of scores made by the masked dart champion "Bullseye Bill":  
(24, 42, 13, 40, 68, 72, 25, 50, 38, 58).

Find:

- 1 the range of the scores
- 2 the mean of the scores
- 3 the standard deviation of the scores

## Worksheet 28

A 1



- B** 1 (a)  $A = 10\text{ m}$  (b)  $A = 15\text{ m}$  (c)  $A = 10\text{ m}$   
 $B = 6\text{ m}$   $B = 6\text{ m}$   $B = 11\text{ m}$   
 $C = 2\text{ m}$   $C = 8\text{ m}$   $C = 12\text{ m}$
- 2  $A = 3.69\text{ m}$  (a)  $A = 16.8\text{ m}$   
 $B = 7.85\text{ m}$
- C** 1 (a)  $x = 8.28\text{ m}$  (b)  $y = 8.00\text{ m}$   
 2  $x = 6.5\text{ m}$  3  $x = 25.74\text{ m}$
- D** 1 (a)  $20.27\text{ km}$  (b)  $13.19\text{ km}$  (c)  $25\text{ km}$   
 2  $86.85\text{ m}$
- E** 1 59 2 43 3 19.32