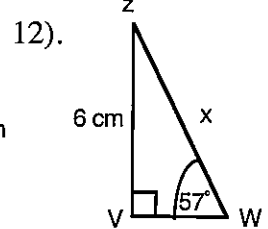
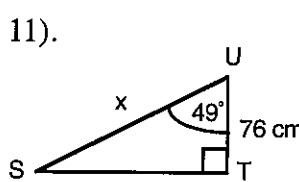
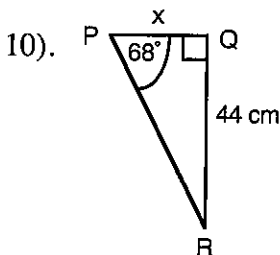
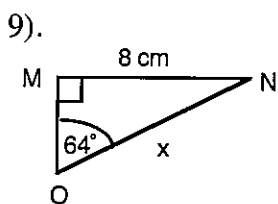
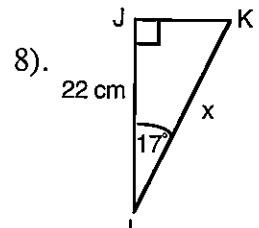
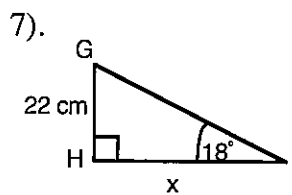
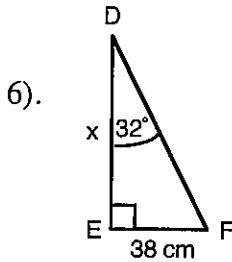
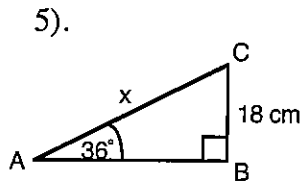
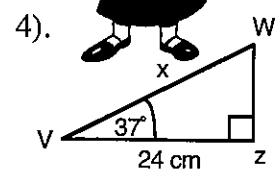
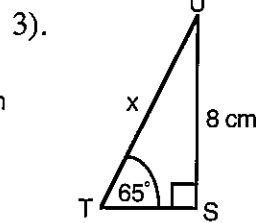
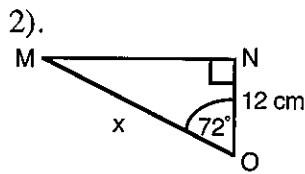
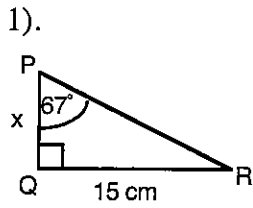




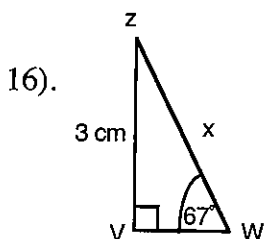
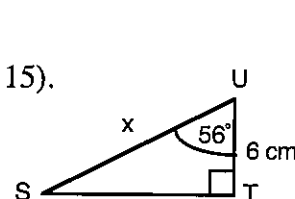
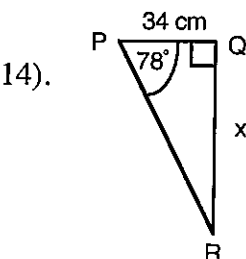
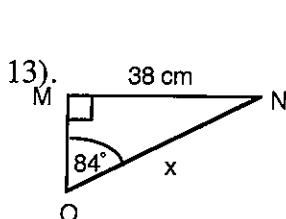
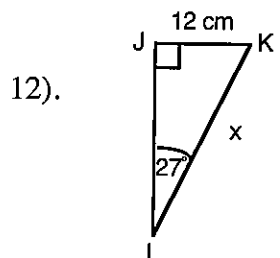
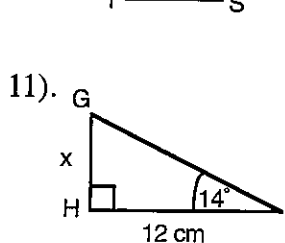
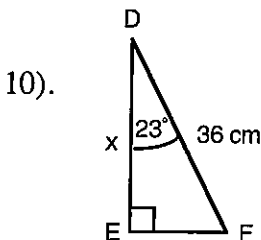
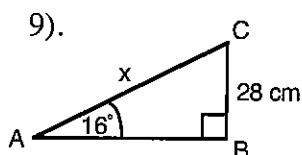
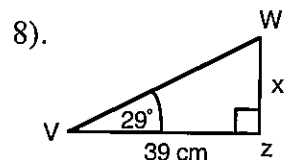
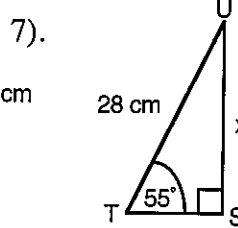
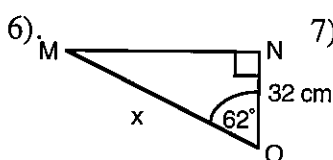
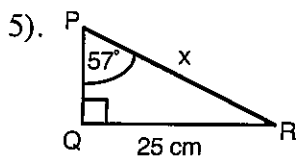
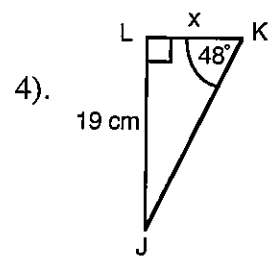
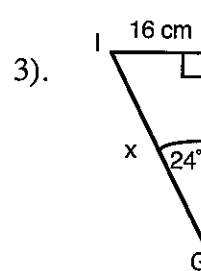
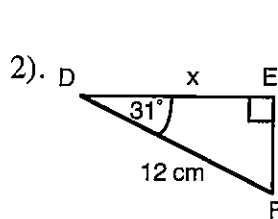
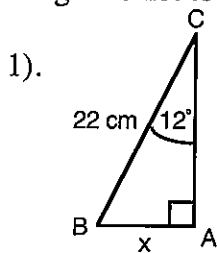
Trigonometry 2.



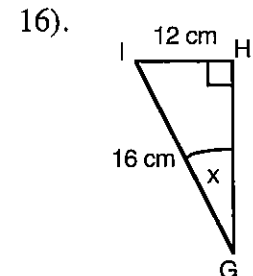
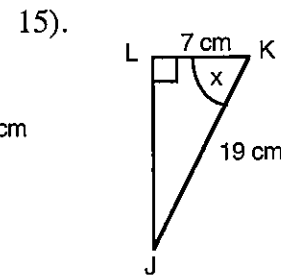
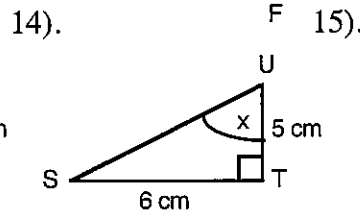
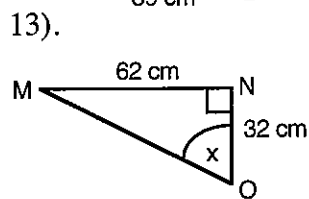
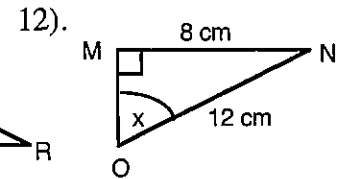
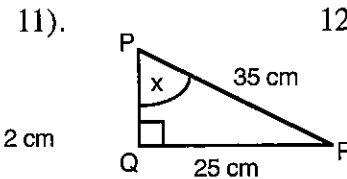
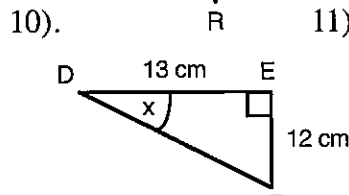
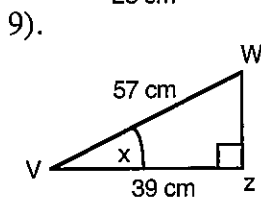
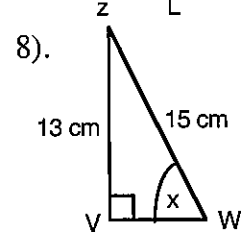
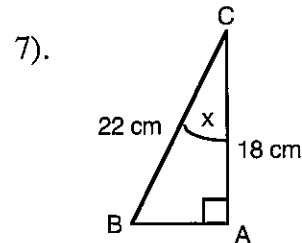
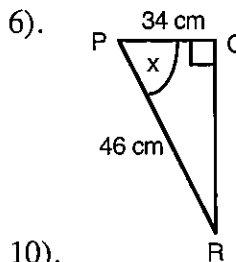
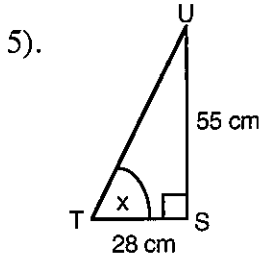
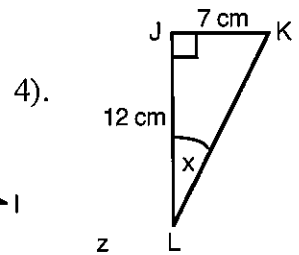
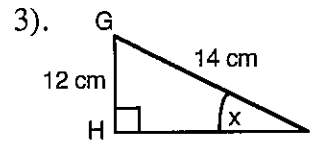
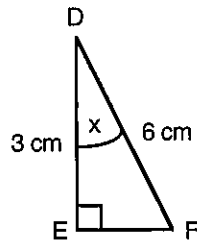
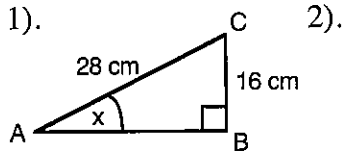
A. Find the length of the side marked x, leave all answers to 1 decimal place. Diagrams not to scale.



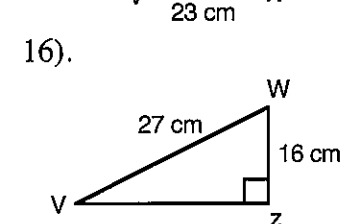
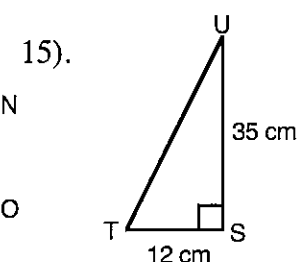
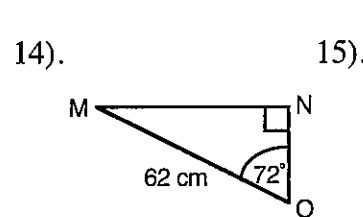
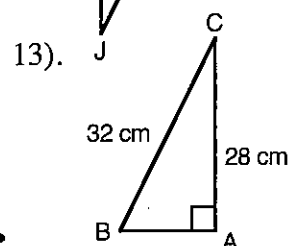
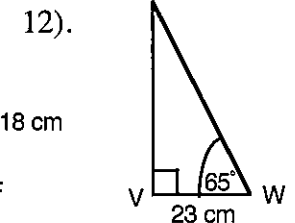
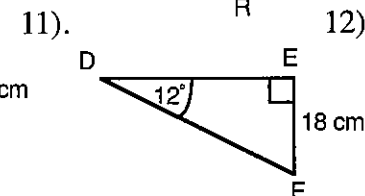
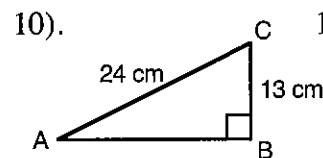
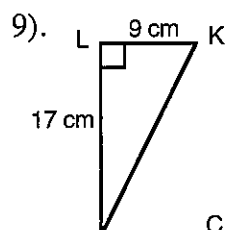
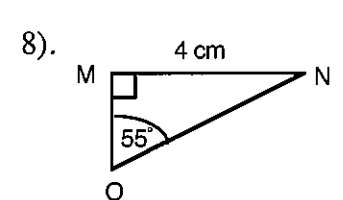
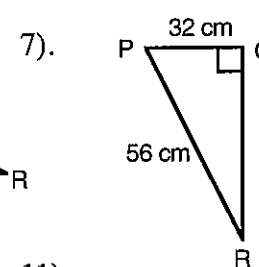
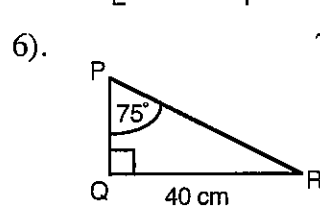
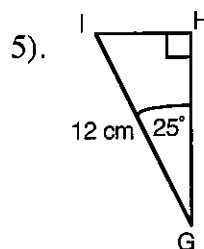
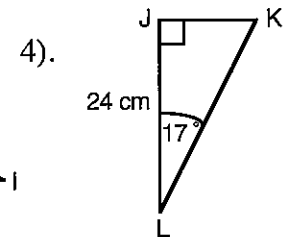
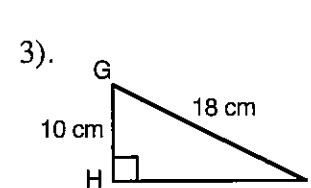
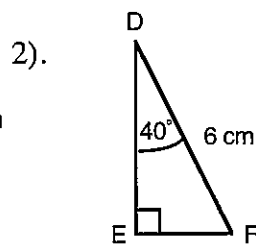
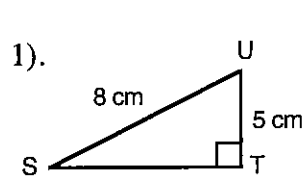
B. Find the length of the side marked x, leave all answers to 1 decimal place. Diagrams not to scale.



C). Find the angles marked x.

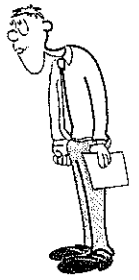


D). In the following triangles find **all** the missing angles and sides.

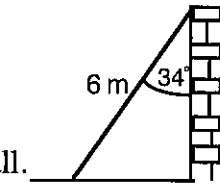




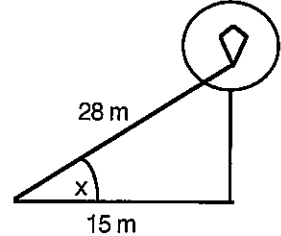
Trigonometry Worded Questions 1.

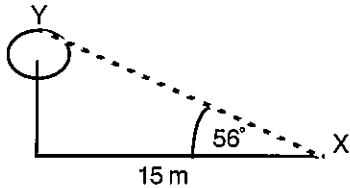


- 1). A ladder that is 6 metres long is placed against a wall. It makes an angle of 34° with the wall. Find
- how high up the wall it reaches,
 - the distance the base of the ladder is away from the wall.

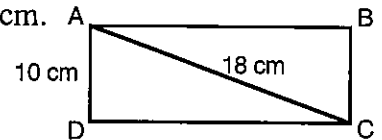


- 2). A boy gets his kite stuck in a tree. He knows that the amount of string let out is 28 metres and the distance he is from the tree is 15 metres. Find
- the angle, x , that the string makes with the ground,
 - how high up the tree the kite is.

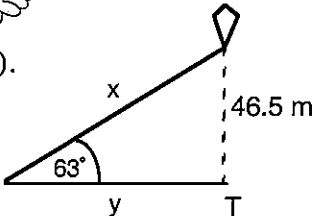


- 3).  Find the height of the tree and the distance XY.

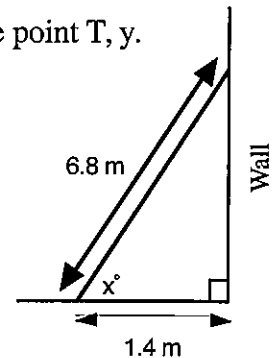
- 4). ABCD is a rectangular sheet of paper. $AC = 18$ cm and $AD = 10$ cm. Calculate
- the angle BAC,
 - the length of AB, in cm, to 1 d.p..

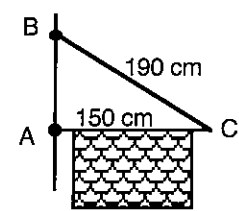


- 5). A boy flies a kite. The string makes an angle of 63° to the ground. The kite is 46.5 metres vertically above a point T. Find
- the length of string needed, x ,
 - the distance from the boy to the point T, y .



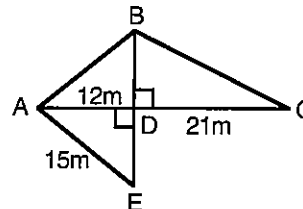
- 6). A ladder, 6.8 m long, leans against the vertical wall of a house. The foot of the ladder is 1.4 m from the wall on horizontal ground.
- Calculate, to the nearest degree, the size of the angle, x° , which the ladder makes with the ground.
 - Calculate the height of the top of the ladder above the ground to the nearest cm.

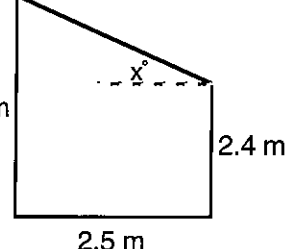


- 7).  Two metal rods are hinged at C. A and B are attached to a vertical wall. AC is horizontal.
- Calculate AB (to 2 s.f.).
 - Find $\angle BCA$ to the nearest degree.
 - Find $\angle ABC$ to the nearest degree.

- 8). In the diagram $BD = DE$.

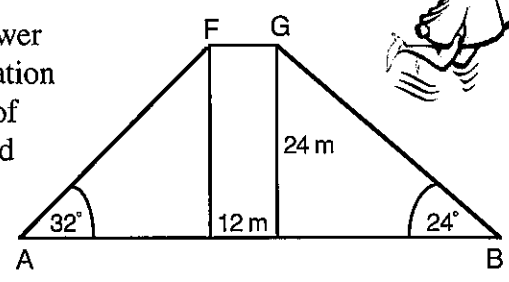
- Find
- DE,
 - $\angle DAE$,
 - BC,
 - $\angle BCD$.



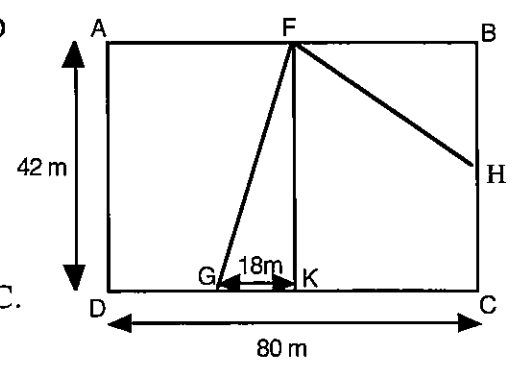
- 9).  The cross sectional area of a shed is a trapezium. The taller side is 2.8 metres and the shorter side is 2.4 metres. The distance between the sides is 2.5 metres. Find
- the angle of slope of the roof with the horizontal,
 - the length of the sloping roof.



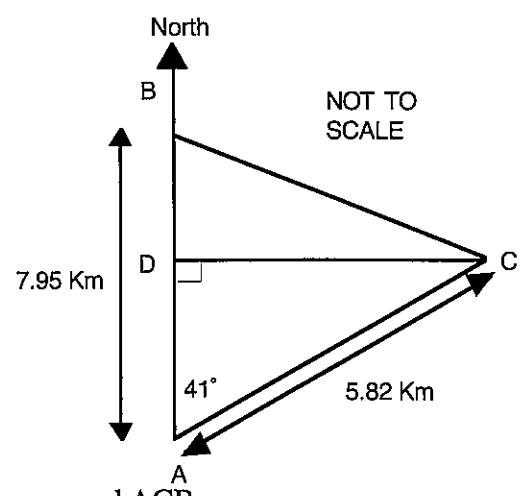
- 10). Two people, A and B, are on the opposite sides of a tower 24 metres high and 12 metres wide. The angle of elevation from A to the top of the tower, F, is 32° and the angle of elevation from B to the top of the tower, G, is 24° . Find
- the distance AF,
 - the distance BG,
 - the distance AB.



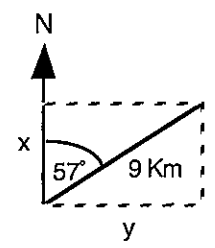
- 11). The diagram shows a rectangular hockey pitch ABCD which is 80 metres long and 42 metres wide. Gina is standing at G on one side line, 18 metres from the centre line FK. She hits the ball in a straight line to Fiona at F.
- Calculate the distance that the ball travels from Gina to Fiona, to 1 d.p..
- Fiona now hits the ball towards H, the midpoint of BC.
- Calculate the angle, to the nearest degree, which the line FH makes with the centre line.



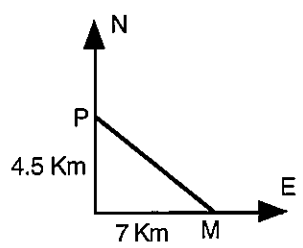
- 12). The straight road from Alton to Barton runs due North for a distance of 7.95 Km. This road is represented by the straight line AB in the diagram. It is proposed to build a new road in two sections. The first section (shown by AC in the diagram) will run from Alton on a bearing of 041° and will be 5.82 Km long. The second section is shown by CB. The point on AB due West of C is D.
- Calculate, correct to three significant figures,
- the distance CD,
 - the distance AD,
 - the distance BD,
 - the difference in length between the road AB and the new road ACB.



- 13). An explorer walks on a bearing of 057° for 9 Km. Find
- how far North of the original position he has walked, x,
 - how far East of the original position he has walked, y.



- 14). Find the bearing of
- M from P,
 - P from M.



- 15). A walker notes that a monument is due North and 7.5 Km from him. He then walks on a bearing of 041° .
- Copy the diagram down and mark on it the point Y where he is closest to the monument.
 - Calculate how far he is from the monument at this point to 2 decimal places.

