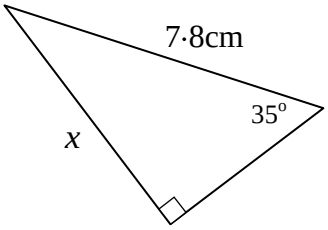
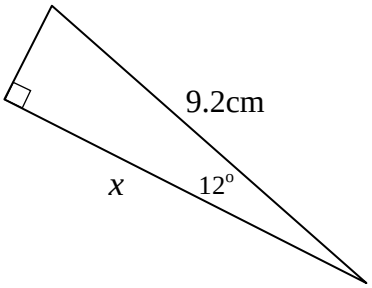
National 4 Relationships Homework – Calculating a side in a right-angled triangle

1. Calculate the length of the side marked *x* in each diagram below. *Show all your working*.

(a)



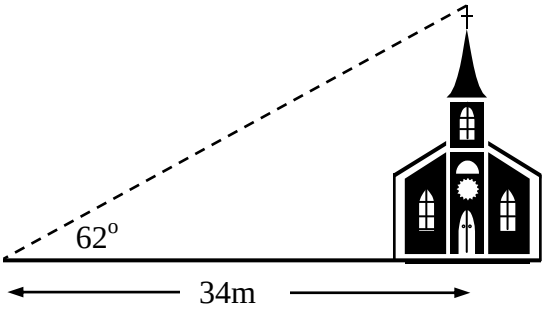
(b)



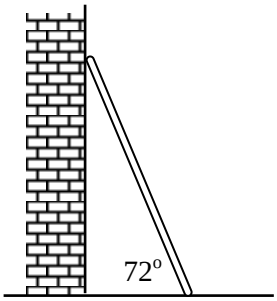
[3, 3]

2. Shannon is standing 34 metres away from the bottom of a church tower. She looks up at the top at an angle of elevation of 62°. Calculate the height of the tower.

[3]



3. A ladder, which is 5.8 metres long, leans against a vertical wall and makes an angle of 72° with the ground.



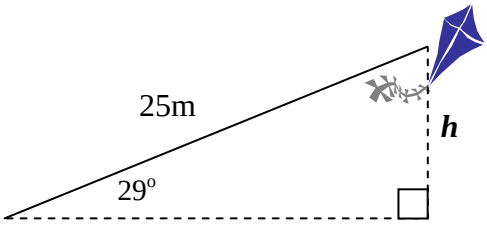
Calculate, to the nearest 0·1m, how far the bottom of the ladder is from the wall. [3]

4. Ellie is flying her kite. The string is at an angle of 29° to the horizontal.

She lets out 25 metres of string.

How high is the kite above the ground?

[3]



[15 marks]