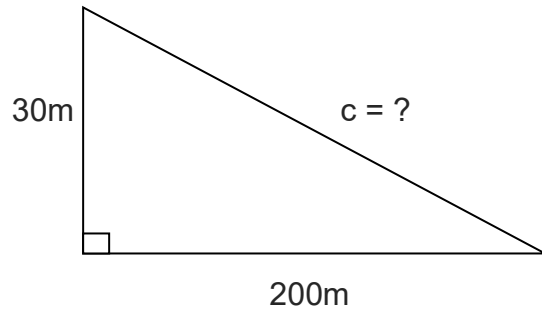
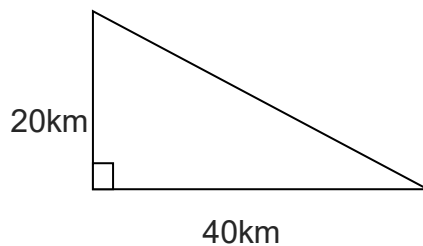


PYTHAGORAS'S RULE

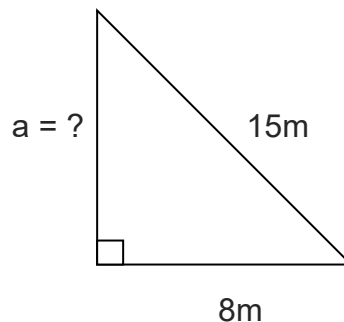
APPLICATIONS



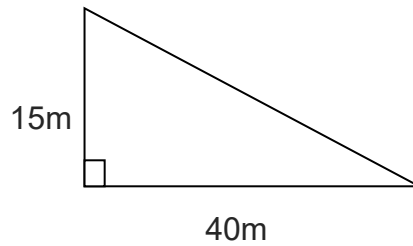
Q1. At boot camp, a flying fox rope is tied to a tree 30m above the ground. The other end is anchored to the ground at a horizontal distance of 200m from the tree. How long is the rope?



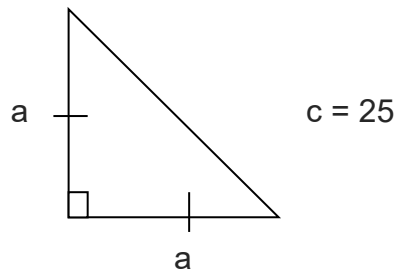
Q2. A ship sails due South for 20km and then due East for 40km. How far is it from its starting point?



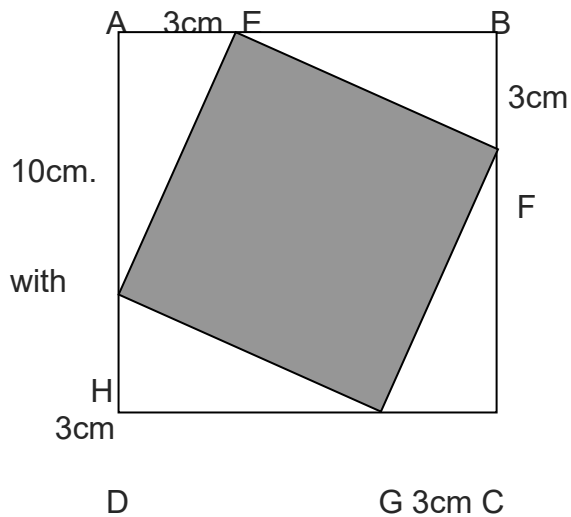
Q3. The ladder on a fire truck is 15 metres long. The fire truck is 8 metres long. When outstretched on a building, what is the maximum height reached by the ladder?



Q4. A motorbike stunt rider needs a take-off ramp at least 45 metres long for a successful jump. In the enclosed stadium, the distance available to build the ramp is 40 metres horizontally and 15 metres vertically. Will this be suitable for the jump?

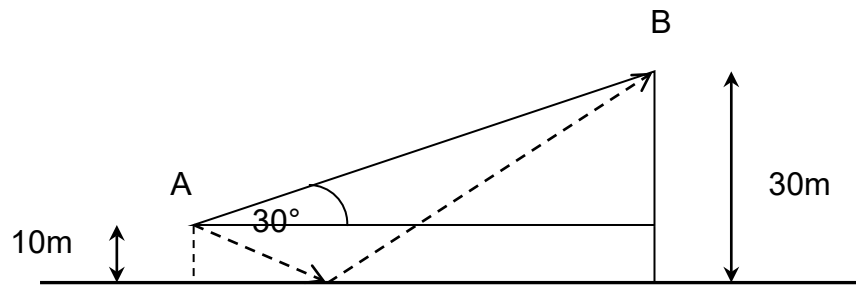


Q5. The hypotenuse of the isosceles right-angled triangle is 25cm long. Find the length of the side marked 'a'.



Q6. ABCD is a square with a side of 10cm. Points E, F, G and H are on the sides AB, BC, CD and DA respectively with measurements in cm as shown. Find the area of the shaded section.

Q7. What is the longest straight distance inside a cube with a side of 10cm? (Hint: Draw diagrams.)



Q8. In a novelty race at a sports carnival, the competitors run from point A , touch the wall and then run on to point B. Point A is 10 metres from the wall. Point B is 30 metres from the wall. The direction of AB makes an angle of 30° with the direction of the wall. The winner was the top Math student who worked out the quickest route from A to B. How far did she run?

ANSWERS

Q1. 202.24 m

Q2. 44.72 km

Q3. 12.69 m

Q4. No, 42.72 m

Q5. 17.68 cm

Q6. 58 cm²

Q7. 17.32 cm

Q8. 53 m