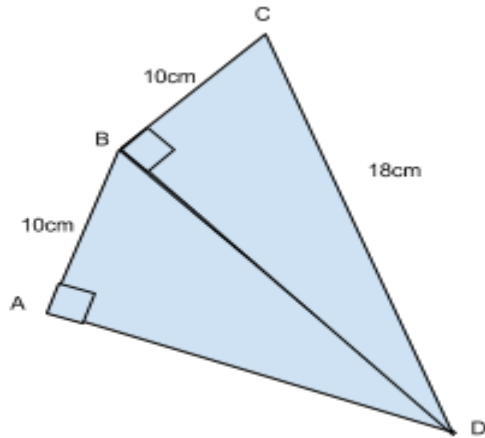# QT Pythagorus' Theorem - Higher

1.   a) Calculate the lengths BD and AD
         b) What is the total perimeter of the shape?
         c) What is the total area of the quadrilateral?

2. Find the length of XY when X and Y have the coordinates:

a) X (6,3) Y (2,8)
b) X (11,6) Y (13, 0)
c) X (11, -4) Y (-5, 5)
d) X (-11,-2) Y (-2, -7)

3. Joe travels at 12 km/h for an hour due north. He then turns due west and travels at 6 km/h. How far is he from his starting point? What bearing must he travel to return home?

4. A builder is replacing a roof beam and needs to know its length. The measurements he knows are shown on the diagram. How long should the beam be?