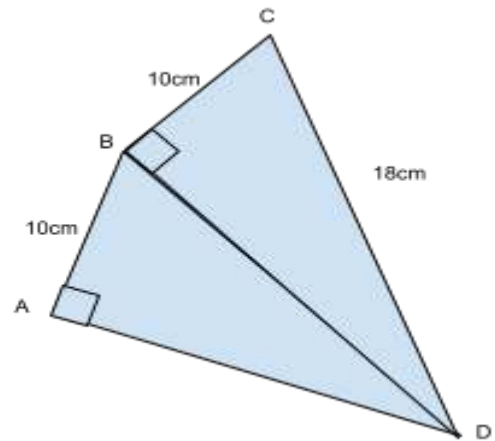




## QT Pythagoras' Theorem - Challenging

- 1 (a) Calculate the lengths  $BD$  and  $AD$ , giving your answers correct to 2 decimal places.  
(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. Give your answer correct to 3 significant figures.

a)  $X(6,3)$   $Y(2,8)$

b)  $X(11,6)$   $Y(13, 0)$

3. Joe travels at  $12 \text{ km/h}$  for an hour due north. He then turns due west and travels at  $6 \text{ km/h}$  for one hour. 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? Give your answer correct to 2 decimal places.

