1. Rectangular picture frames are about to go to production with the measurements shown below. The manufacturer wants to check the frames are rectangular.
   Should he put these measurements to production? Explain your answer clearly.

   20cm

   12cm

   16cm
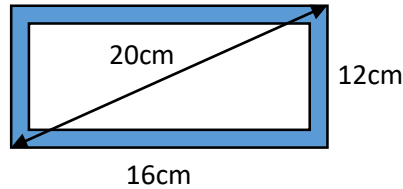
2. A new sloping roof is being fitted to a garage to prevent leaking. James thinks the roof is right angled. Is he correct? Show all your working.

   .

   8cm   17cm

   18cm
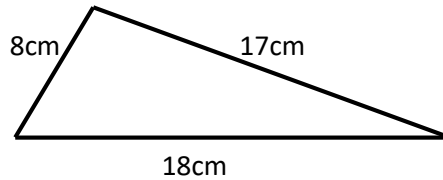
3. The diagram shows in intended flight path of an aircraft. The pilot believes there is a problem with the compass directions.
   Should he be concerned about this? Show all your working.

   North ------ 560km ------> East

   420 km

   700km
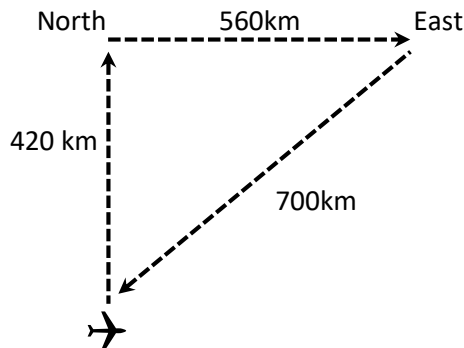
4. A new road network has been constructed between 3 towns. The council hoped that 2 of the roads would be perpendicular to avoid unnecessary expense. Did they achieve this by building the network as shown? Explain your answer.

   A

   36km   29km

   C

   B   46km
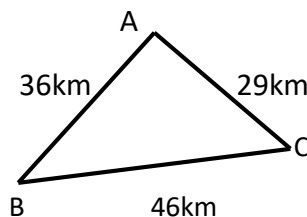
5. Television screen sizes are measures diagonally across the visible part of the screen. Manufacturers claim that screens with a length of 31 inches and a height of 24 inches can be advertised as 42 inch television sets. Is this claim true?
   Show all your working.