Practice worksheet | Pythagoras and Trigonometry

Linked triangles

Name: _____ Date: _____

6 questions | 17 marks

1. Two right triangles share a height. One has base 8 cm and hypotenuse 17 cm; the other base is 20 cm. Find its hypotenuse. [3 marks]

2. A 10 m ladder moves from base distance 6 m to 8 m. Find its top drop. [3 marks]

3. A 12 m mast has ground anchors 5 m and 9 m from its base on opposite sides. Find both cable lengths and anchor separation. [3 marks]

4. A symmetrical triangular roof has span 20 m and rise 9 m. Find either slope to 0.1 m. [3 marks]

5. Points on level ground are 20 m and 40 m from a 12 m tower. Find both elevation angles to 0.1°. [3 marks]

6. Two adjacent right triangles have bases 3 m and 4 m and share a height. Why cannot 7 m be used as the base of each triangle? [2 marks]