Practice worksheet | Pythagoras and Trigonometry

Practical right-triangle problems and interpreting diagrams

Name: _____ Date: _____

6 questions | 20 marks

1. A 13 m ladder has its foot 5 m from a wall. Find its vertical reach. [3 marks]

2. The same 13 m ladder slides so its foot is now 12 m from the wall. How far does the top drop? [4 marks]

3. A ramp makes 7° with level ground and has horizontal run 4.8 m. Find its sloping length to two decimal places. [3 marks]

4. A vertical pole casts a 4.5 m shadow on level ground. The Sun’s elevation is 36°. Find the pole height to two decimal places. [3 marks]

5. A taut 30 m kite string begins at ground level and makes 40° to horizontal. Find the kite height to two decimal places. [3 marks]

6. Eyes are 1.6 m above level ground, 30 m horizontally from a building. Its top is at 25° above horizontal. Find total height to two decimal places. [4 marks]