

Solutions

2.1 Pythagoras gives $\sqrt{3^2+4^2}=5$.

2.2 Sine=opposite/hypotenuse= $3/5=0.6$.

2.3 The sides are perpendicular, so area= $6 \times 8 / 2 = 24$.

3.1 False. An equilateral triangle of side 1 has $1^2+1^2=2 \neq 1^2$. Pythagoras requires a right angle and identifies the opposite hypotenuse.

Local review guidance: show the chosen method; give the checked result; explain the condition or failed shortcut. This is authored classroom guidance.