

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= $6\times 8/2=24$.

2.4 False. Label sides relative to the chosen angle. Pythagoras needs a right angle. A calculator angle mode error can produce a plausible but wrong result. Keep unrounded values for later steps.

2.5 A The side opposite the right angle in a right-angled triangle.

3.1 Sine rule gives $\sin B = 10 \sin 30^\circ / 7 = 5/7$. $B \approx 45.585^\circ$ or 134.415° ; both leave a positive third angle. The ambiguous SSA case has two solutions, unlike a right-triangle shortcut.