

Solutions

2.1 $36+64-96\times\cos60^\circ=52.$

2.2 $(25+36-49)/(2\times5\times6)=12/60.$

2.3 $\sin C=2\times12/(6\times8)=1/2.$

3.1 False. In a $30^\circ-60^\circ-90^\circ$ triangle with opposite sides $1,\sqrt{3},2$, the correct ratios are $1/\sin30^\circ=2$ and $2/\sin90^\circ=2$. Pairing side 1 with 60° instead gives $2/\sqrt{3}$, which is different.

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