Choosing a Trig Tool

With your team:

• Look through all the triangles first and see if any look familiar. If possible, find the missing side length without using a trig tool.

• Then, identify which tool to use based on where the reference angle (the given acute angle) is located and which side lengths are involved.

• Write and solve an equation to find the missing side length.

a.  
\[
\begin{array}{c}
\text{19} \\
\theta \\
\cos \theta = \frac{\text{adj}}{\text{hyp}} \\
\text{28°} \\
\end{array}
\]

b.  
\[
\begin{array}{c}
\theta \\
\sin \theta = \frac{\text{opp}}{\text{hyp}} \\
\text{45°} \\
\theta \\
\cos \theta = \frac{\text{opp}}{\text{adj}} \\
\text{8} \\
\end{array}
\]

c.  
\[
\begin{array}{c}
\theta \\
\cos \theta = \frac{\text{adj}}{\text{hyp}} \\
\text{61°} \\
\end{array}
\]

d.  
\[
\begin{array}{c}
\theta \\
\cos \theta = \frac{\text{adj}}{\text{hyp}} \\
\text{25°} \\
\text{6} \\
\end{array}
\]

e.  
\[
\begin{array}{c}
\theta \\
\sin \theta = \frac{\text{opp}}{\text{hyp}} \\
\text{60°} \\
\theta \\
\cos \theta = \frac{\text{adj}}{\text{hyp}} \\
\text{8} \\
\end{array}
\]

f.  
\[
\begin{array}{c}
\theta \\
\cos \theta = \frac{\text{adj}}{\text{hyp}} \\
\text{30°} \\
\text{42} \\
\end{array}
\]

g.  
\[
\begin{array}{c}
\theta \\
\cos \theta = \frac{\text{adj}}{\text{hyp}} \\
\text{63} \\
\end{array}
\]

h.  
\[
\begin{array}{c}
\theta \\
\cos \theta = \frac{\text{adj}}{\text{hyp}} \\
\text{73°} \\
\text{3} \\
\end{array}
\]

i.  
\[
\begin{array}{c}
\theta \\
\cos \theta = \frac{\text{adj}}{\text{hyp}} \\
\text{42°} \\
\text{12} \\
\end{array}
\]