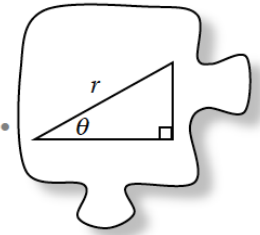


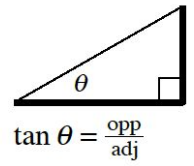
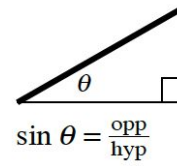
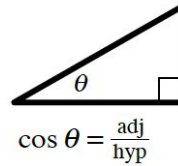
# 4.2.2 Which tool should I use?



## Selecting a Trig Tool

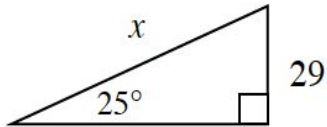
4-68

- Look through all the triangles and determine the missing side lengths without using a trigonometric tool.
- Then, for all other triangles, identify which tool you should 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 determine the missing side length.



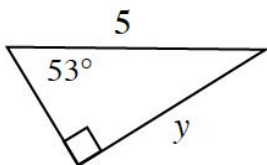
<p>a)</p>	<p>b)</p>	<p>c)</p>
<p>d)</p>	<p>e)</p>	<p>f)</p>
<p>g)</p>	<p>h)</p>	<p>i)</p>

4-69 Marta & Ziv



<p><b>Marta's Method:</b></p> $\sin 25^\circ = \frac{29}{x}$ $x(\sin 25^\circ) = 29$ $x = \frac{29}{\sin 25^\circ}$	<p><b>Ziv's Method:</b></p> $\cos 65^\circ = \frac{29}{x}$
<p>Solve for <math>x</math>:</p>	<p>Solve for <math>x</math>:</p>

Solve for  $y$  in the diagram at right in two ways, using both sine and cosine ratios. Write both equations, show all of your work, and make sure both strategies result in the same answer.



<p><b>Sine:</b></p>	<p><b>Cosine:</b></p>
<p>Solve for <math>y</math>:</p>	<p>Solve for <math>y</math>:</p>

4-70 - Missing Angles

Write an equation to solve for the missing angles.

<p>a)</p> <p>A right-angled triangle with a right angle symbol at the bottom right. The horizontal leg is labeled <math>9</math>. The vertical leg is labeled <math>9</math>. The angle at the bottom left is labeled <math>\theta</math>.</p>	<p>b)</p> <p>A right-angled triangle with a right angle symbol at the bottom left. The vertical leg is labeled <math>1</math>. The horizontal leg is labeled <math>5</math>. The angle at the top right is labeled <math>\theta</math>.</p>	<p>c)</p> <p>A right-angled triangle with a right angle symbol at the top right. The hypotenuse is labeled <math>10</math>. The leg on the left is labeled <math>5</math>. The angle at the top left is labeled <math>\theta</math>.</p>
<p>a) Equation:</p>    $\theta = \underline{\hspace{2cm}}$	<p>b) Equation:</p>    $\theta = \underline{\hspace{2cm}}$	<p>c) Equation:</p>    $\theta = \underline{\hspace{2cm}}$

