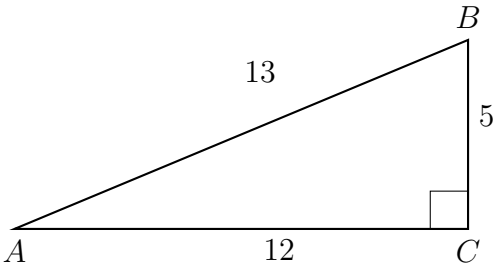
**10.4 Do Now Quiz: Trigonometric functions** **HSG.SRT.C.8**

1. Right triangle $\triangle ABC$ is shown with side lengths marked. Identify the sides.

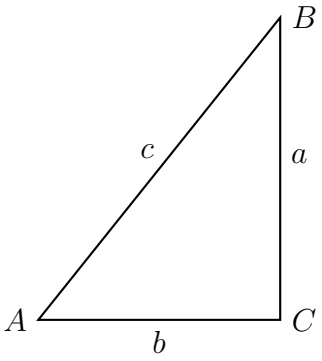
   (a) Which length is the hypotenuse?

   (b) Which length is *opposite* angle $A$?

   (c) Which length is *adjacent* to angle $A$?




2. $\triangle ABC$ is shown with $m\angle C = 90°$. The lengths of the triangle's sides are $a$, $b$, and $c$. Express each trigonometric ratio as a fraction of two lengths.




   (a) $\tan A =$

   (b) $\sin A =$

   (c) $\cos A =$

3. Express the result to *the nearest thousandth*.

   (a) $\tan 81° =$ (b) $\sin 16° =$

4. Express the result to *the nearest whole degree*.

   (a) $\sin^{-1} 0.675 =$ (b) $\tan^{-1} 1.15 =$

**Early finishers / test corrections** **HSA.REI.B.3**

5. Are the lines parallel, perpendicular, or neither? Justify your answer. (you must use the values of the slopes in your justification)

   $y = -\frac{5}{3}x + 5$ $y = \frac{3}{5}x - 4$

6. Given $P(1, 7)$ and $Q(5, 5)$, find the length of $\overline{PQ}$, expressed as a simplified radical.
   Use: $l = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

7. A translation $T_{x,y}$ maps $A(6, 2) \to A'(3, 7)$.

   (a) Write down the translation.

   (b) Apply the same translation to $B(5, 1)$.

8. $A(2, 3)$ is one endpoint of $\overline{AB}$. The segment's midpoint is $M(5, 7)$. Find the other endpoint $B$. (hint: find the translation that maps $A \to M$, then apply it to map $M \to B$.)