10.15 Classwork: Unit review **HSG.SRT.C.8**

1. As shown, right $\triangle ABC$ has $AC = 8, BC = 15, AB = 17$, $\text{m}\angle C = 90°$.

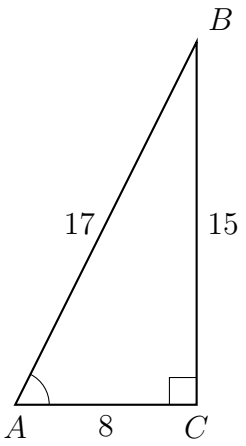
   Express each trigonometric ratio as a fraction.

   (a) $\sin A =$

   (b) $\cos A =$

   (c) $\tan A =$

   (d) Find $m\angle A$, to the *nearest degree*.

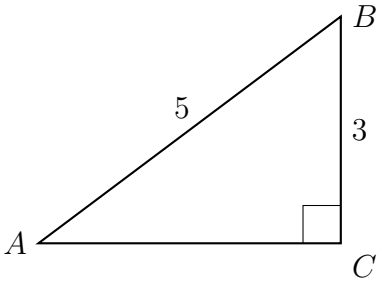


2. Right triangle $\triangle ABC$ is shown with measures as marked.

   (a) Write down $\sin A$.

   (b) Find the length of side AC.

   (c) Find the angle measure of $\angle A$, rounded to the *nearest degree*.



3. In a right triangle, the acute angles have the relationship $\sin(2x + 7) = \cos(33)$.

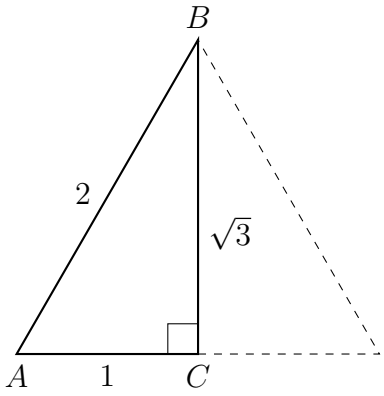
   Find the value of x.

4. Right $\triangle ABC$ has base $AC = 1$, height $BC = \sqrt{3}$, and hypotenuse $AB = 2$ as marked. (A reflection $\triangle ABC$ of is also shown.)

   (a) Write down the angle measure of $\angle A$.

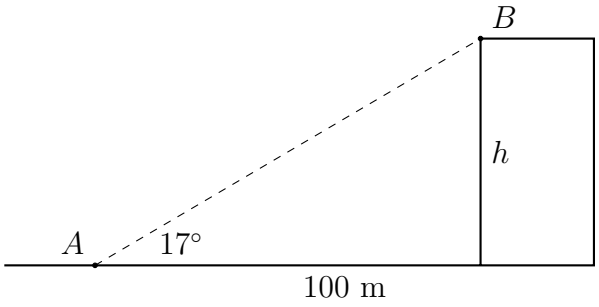
   (b) Write down the angle measure of $\angle ABC$.

   (c) Write down $\cos A$.



5. At an angle of elevation of 17°, the top of a structure B is visible from point A on the ground 100 meters away, as shown below.

   Find the height h of the structure to the *nearest meter*. (not to scale)



6. A pirate is looking down from the top of a mast with a height of 12 meters. Below him, the pirate sees an enemy ship 100 meters away.

   Find the angle of depression to the *nearest degree*.