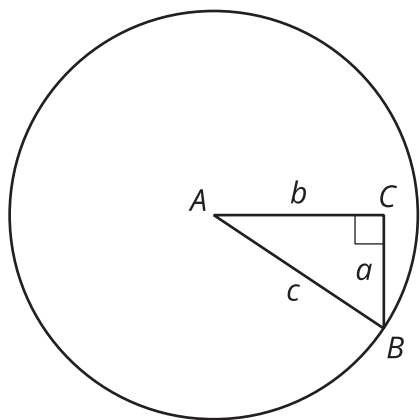# Unit 6 Lesson 2: Revisiting Right Triangles

1 Notice and Wonder: A Right Triangle (Warm up)
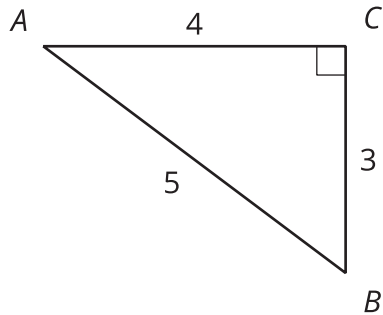
Student Task Statement

What do you notice? What do you wonder?
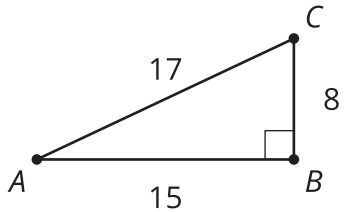
2 Recalling Right Triangle Trigonometry

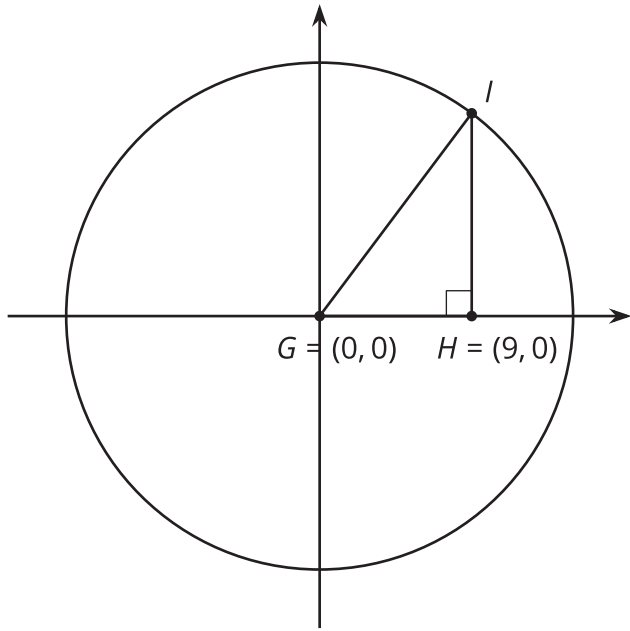**Images for Launch**

Student Task Statement

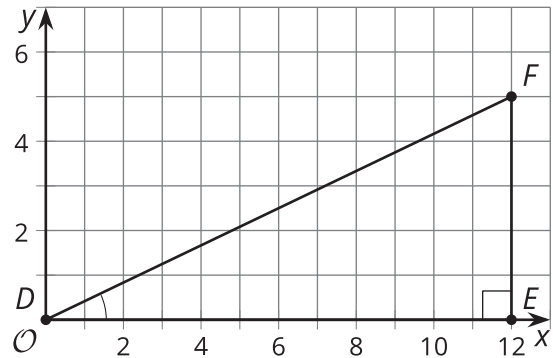1. Find $\cos(A)$, $\sin(A)$, and $\tan(A)$ for triangle ABC.

2. Sketch a triangle DEF where $\sin(D) = \cos(D)$ and E is a right angle. What is the value of $\tan(D)$ for this triangle? Explain how you know.

3. If the coordinates of point I are $(9, 12)$, what is the value of $\cos(G)$, $\sin(G)$, and $\tan(G)$ for triangle GHI? Explain or show your reasoning.
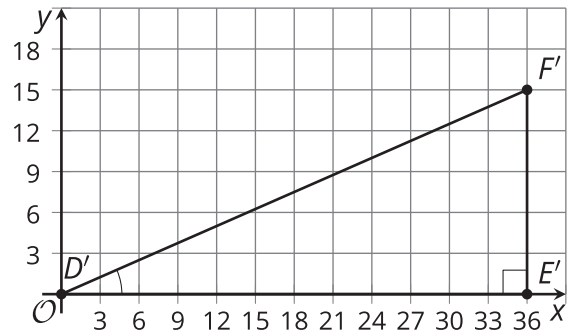
$G = (0, 0)$ $H = (9, 0)$

3 Shrinking Triangles

Student Task Statement

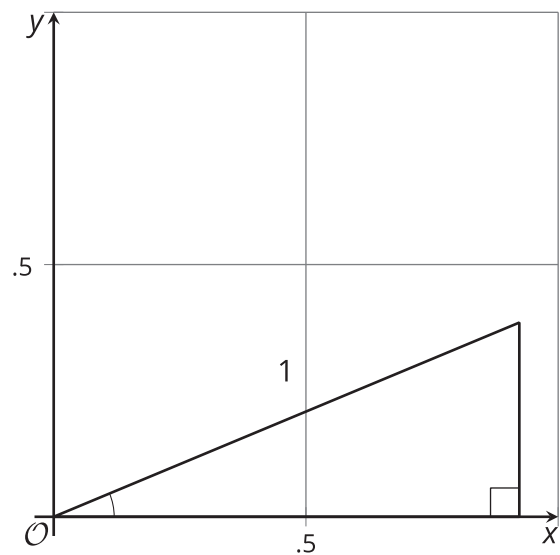1. What are $\cos(D)$, $\sin(D)$, and $\tan(D)$? Explain how you know.

2. Here is a triangle similar to triangle DEF.

   a. What is the scale factor from $\triangle DEF$ to $\triangle D'E'F'$? Explain how you know.

   b. What are $\cos(D')$, $\sin(D')$, and $\tan(D')$?

3. Here is another triangle similar to triangle DEF.

   a. Label the triangle $D''E''F''$.

b. What is the scale factor from triangle DEF to triangle $D''E''F''$?

c. What are the coordinates of F''? Explain how you know.

d. What are $\cos(D'')$, $\sin(D'')$, and $\tan(D'')$?

Images for Activity Synthesis