## 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 $ABC$.
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1. 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.
2. 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.
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### 3 Shrinking Triangles

#### Student Task Statement

1. What are $cos(D)$, $sin(D)$, and $tan(D)$? Explain how you know.
* 
1. Here is a triangle similar to triangle $DEF$.
* 
	1. What is the scale factor from $△DEF$ to $△D^{′}E^{′}F^{′}$? Explain how you know.
	2. What are $cos(D^{′})$, $sin(D^{′})$, and $tan(D^{′})$?
1. Here is another triangle similar to triangle $DEF$.
* 
	1. Label the triangle $D^{″}E^{″}F^{″}$.
	2. What is the scale factor from triangle $DEF$ to triangle $D^{″}E^{″}F^{″}$?
	3. What are the coordinates of $F^{″}$? Explain how you know.
	4. What are $cos(D^{″})$, $sin(D^{″})$, and $tan(D^{″})$?

#### Images for Activity Synthesis





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