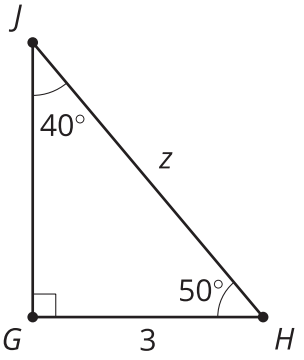
Unit 4 Lesson 6: Working with Trigonometric Ratios

1 This Time with Strategies (Warm up)

Student Task Statement

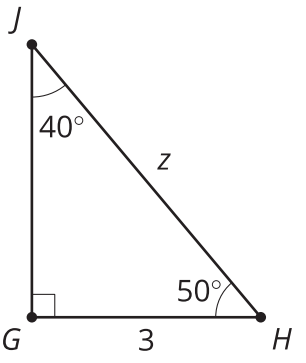
Estimate the value of z.



2 New Names, Same Ratios

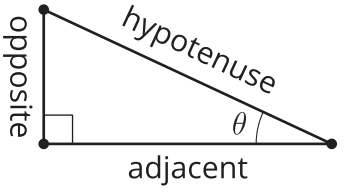
Student Task Statement

1. Use your calculator to determine the values of $\cos(50)$, $\sin(50)$, and $\tan(50)$.
2. Use your calculator to determine the values of $\cos(40)$, $\sin(40)$, and $\tan(40)$.
3. How do these values compare to your chart?
4. Find the value of z.

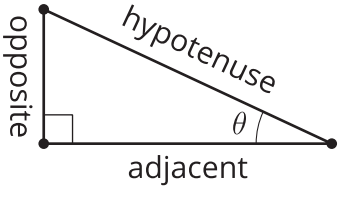


Activity Synthesis

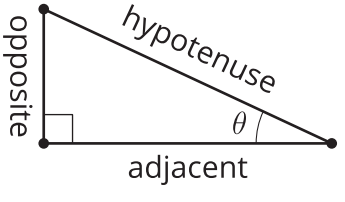
$\cos(\theta) = \frac{\text{adjacent}}{\text{hypotenuse}}$



$\sin(\theta) = \frac{\text{opposite}}{\text{hypotenuse}}$



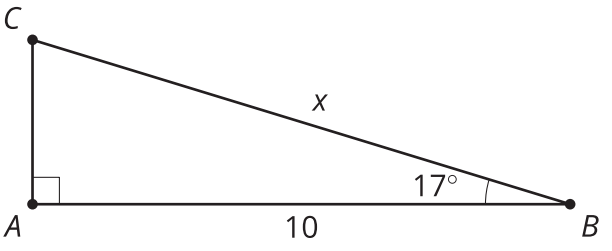
$\tan(\theta) = \frac{\text{opposite}}{\text{adjacent}}$



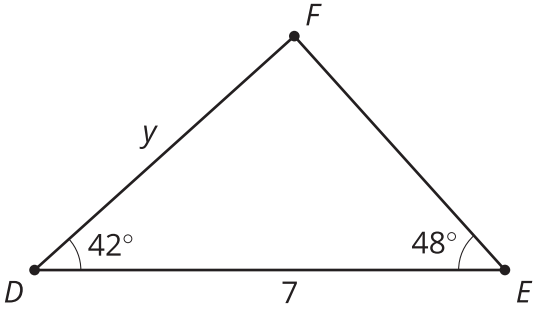
3 Solve These Triangles

Student Task Statement

1. Solve for x.

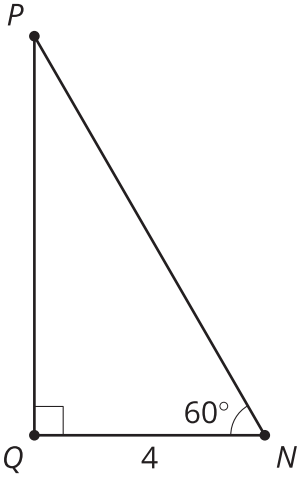


2. Solve for y.



3. Find all the missing sides and angle measures.

   a. The measure of angle X is 90 degrees and angle Y is 12 degrees. Side XZ has length 2 cm.



   b.

   c. The measure of angle K is 90 degrees and angle L is 71 degrees. Side LM has length 20 cm.

Images for Activity Synthesis