Exploring Trigonometric Ratios

1. In the table below, calculate the ratio $\frac{leg\ opposite\ Angle\ A}{hypotenuse}$, which is $\frac{ED}{AD.}$. Do this 3 times, moving point E to change the size of the triangle for the 2nd and 3rd trials.

Measure of Angle A	$\frac{leg\ opposite\ Angle\ A}{hypotenuse}$ (trial one)	$\frac{leg\ opposite\ Angle\ A}{hypotenuse}$ (trial 2)	$\frac{leg\ opposite\ Angle\ A}{hypotenuse}$ (trial 3)
10			
40			
70			

Compare the values in the table you just completed to a table of trig ratios. Do your values for $\frac{leg\ opposite\ Angle\ A}{hypotenuse}$ match the values in one of the columns? Which one?

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(record your response in the GeoGebra activity)

2. What did you observe about the multiple trials using the same angle? (record your response in the GeoGebra activity)

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3. In the table below, calculate the ratio $\frac{leg\ adjacent\ to\ Angle\ A}{hypotenuse}$, which is $\frac{AE}{AD.}$. Do this 3 times, moving point E to change the size of the triangle for the 2nd and 3rd trials.

Measure of Angle A	$\frac{leg\ adjacent\ to\ Angle\ A}{hypotenuse}$ (trial one)	$\frac{leg\ adjacent\ to\ Angle\ A}{hypotenuse}$ (trial 2)	$\frac{leg\ adjacent\ to\ Angle\ A}{hypotenuse}$ (trial 3)
20			
50			
80			

Compare the values in the table you just completed to a table of trig ratios. Do your values for $\frac{leg\ adjacent\ to\ Angle\ A}{hypotenuse}$ match the values in one of the columns? Which one?

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(record your response in the GeoGebra activity)

4. What did you observe about the multiple trials using the same angle? (record your response in the GeoGebra activity)

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