Exploring Trigonometric Ratios Name_____

1) The measure of $\angle A$ is _____. Calculate the ratio $\frac{\text{leg opposite } \angle A}{\text{hypotenuse}}$ which is $\frac{ED}{AD}$. Round to the nearest hundredth. The ratio is _____

2) Move point D to change the size of ΔADE without changing $\angle A$. Find the ratio $\frac{\text{leg opposite } \angle A}{\text{hypotenuse}}$. Round your answer to the nearest hundredth. Repeat the process three times. Record your answers below.

a) _____ b)_____ c)_____

3) What do you observe about the ratios? Why do you think that this is the case?

_____

_____

4) Move point C to change the measure of $\angle A$. The measure of $\angle A$ is _____. Move point D to change the size of ΔADE without changing $\angle A$. Find the ratio $\frac{\text{leg opposite } \angle A}{\text{hypotenuse}}$. Round your answer to the nearest hundredth. Repeat the process three times. Record your answers below.

a) _____ b)_____ c)_____

5) What do you observe about the ratios? Why do you think that this is the case?

_____

_____

6)) Move point D to change the size of ΔADE without changing $\angle A$. Find the ratio $\frac{\text{leg adjacent } \angle A}{\text{hypotenuse}}$. Round your answer to the nearest hundredth. Repeat the process three times. Record your answers below.

a) _____ b)_____ c)_____

7)) Move point D to change the size of ΔADE without changing $\angle A$. Find the ratio $\frac{\text{leg opposite } \angle A}{\text{leg adjacent } \angle A}$. Round your answer to the nearest hundredth. Repeat the process three times. Record your answers below.

a) _____ b)_____ c)_____