Strand: **Algebra**   **Name:___KEY___**

Skill Addressed: Understanding Ratio   **Blk: ___**

Activity: *Slope, Units and Rates of Change – Part A*

Slope is also a Ratio!

Choose a "rise over run" that you would prefer if you had to walk up a ramp.

a) $\dfrac{3}{5}$ b) $\dfrac{8}{15}$ or   c) $\dfrac{4}{7}$

Using Dot Paper, model the three sloped ramps given above. Note that you are assuming that the horizontal and vertical scales of your dot paper are equal. Assume they are in metres. *See next page.*

What are the units of your slope in the examples that you drew? Explain. {hint: think "rise over run"}
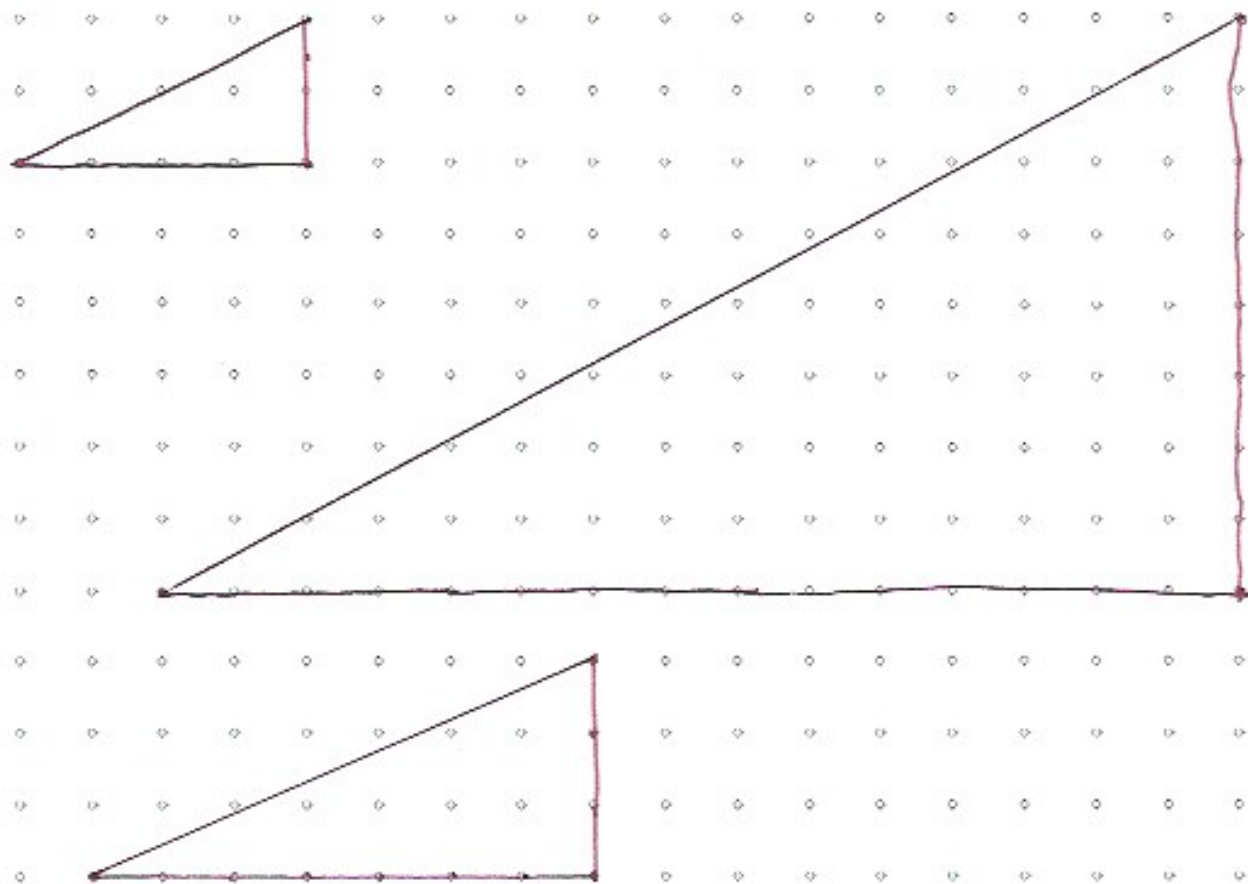
Slope has no units, because meters divided by meters means that the units cancel each other out.

Or, we can say that the slope is vertical meters per horizontal meter.

Choose which is the "easiest" slope now that you have drawn them. Justify your answer.

Four sevenths is smaller than three fifths or eight fifteenths.

Connected Math Activities: **© Lorraine M Baron, 2016**

BLM – half-page Dot Paper
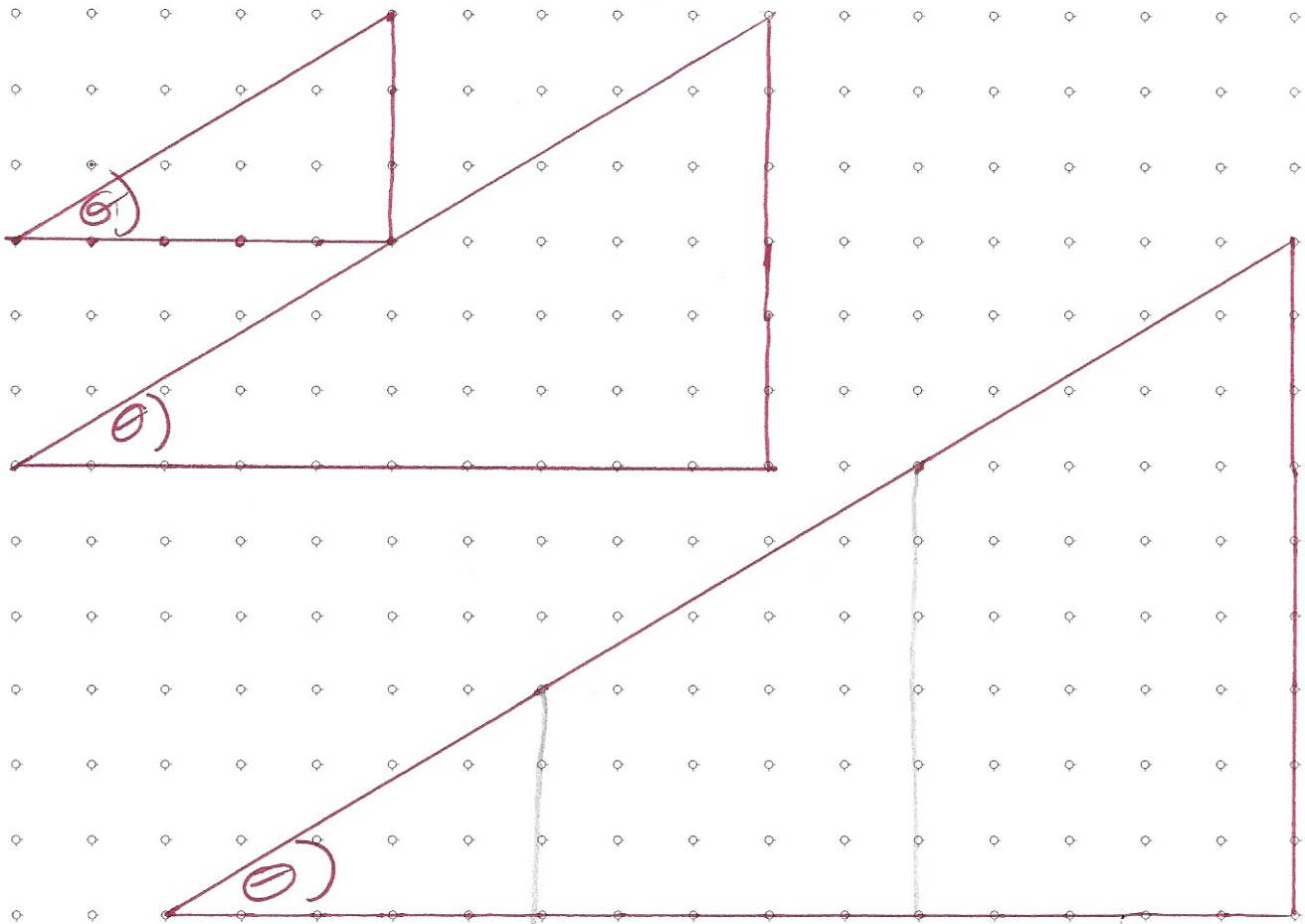
Select any of the 3 slopes in the above question and show 3 different ways to write the same "rise over run".

Example: $\dfrac{3}{5} = \dfrac{?}{?} = \dfrac{??}{??}$ $\dfrac{6}{10} = \dfrac{9}{15}$

Draw each of these "ramps" on the dot paper below.

all have the same angle θ of elevation