

Unit 2, Lesson 10: Meet Slope

NAME _____

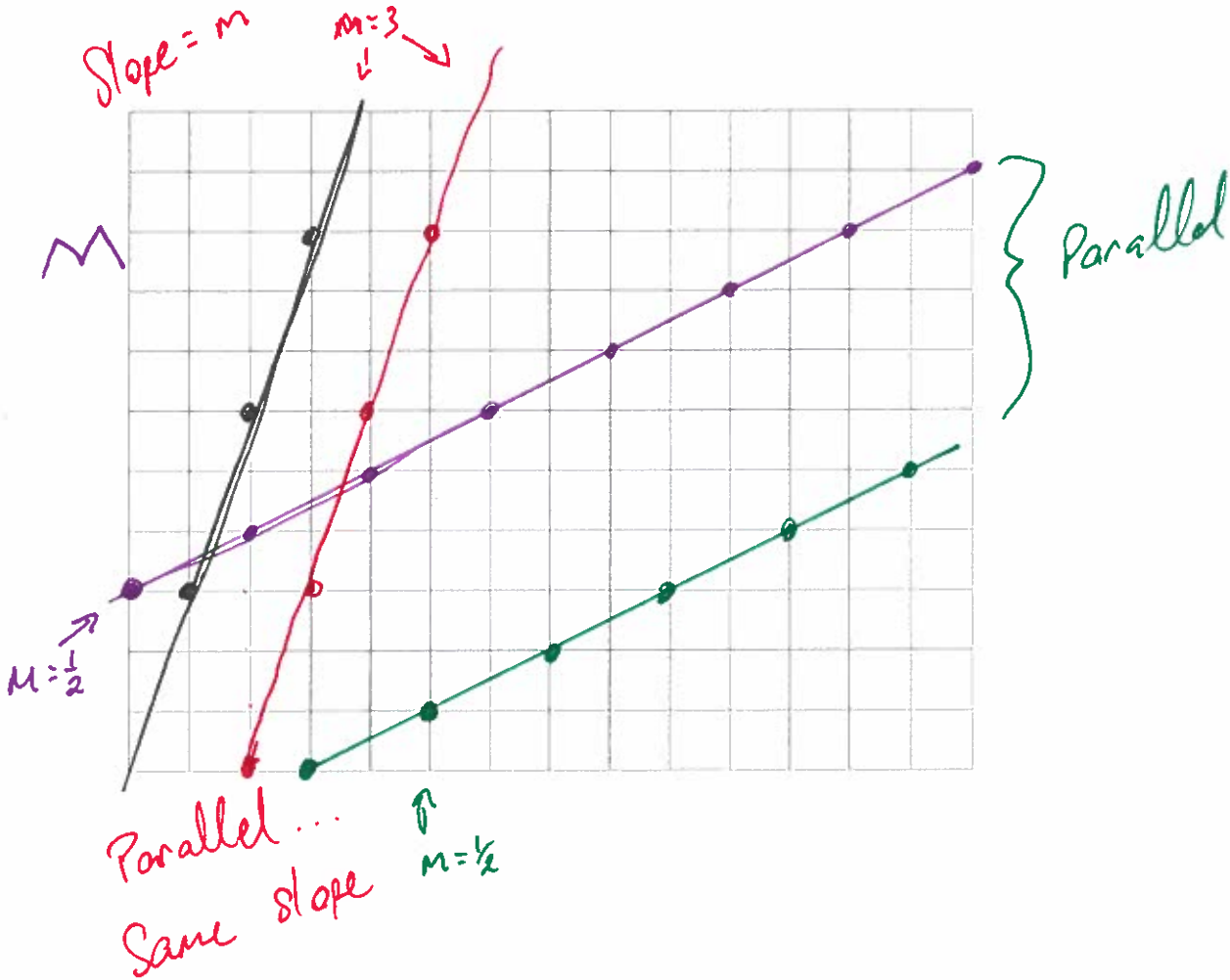
DATE _____

PERIOD _____

$$\frac{\Delta Y}{\Delta X} = \frac{\text{Rise} \uparrow}{\text{Run} \rightarrow}$$

10.3: Multiple Lines with the Same Slope

1. Draw two lines with **slope 3**. What do you notice about the two lines?
 $\rightarrow \frac{3}{1}$
2. Draw two lines with slope $\frac{1}{2}$. What do you notice about the two lines?



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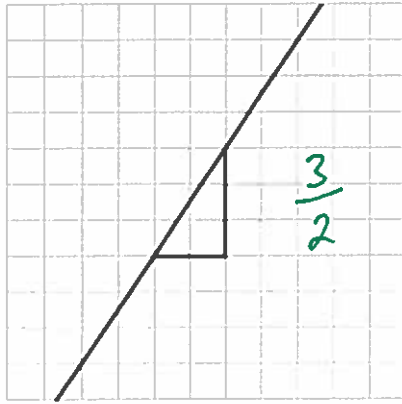
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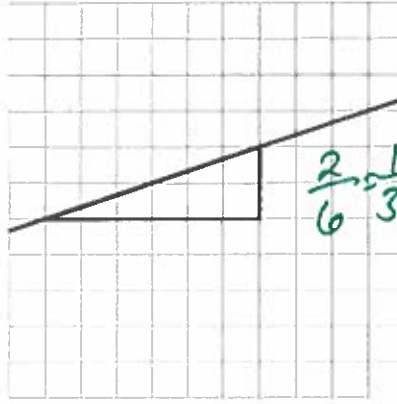
10.4: Different Slopes of Different Lines

$$m = \frac{\Delta y}{\Delta x} = \frac{\text{Rise} \uparrow}{\text{Run} \rightarrow}$$

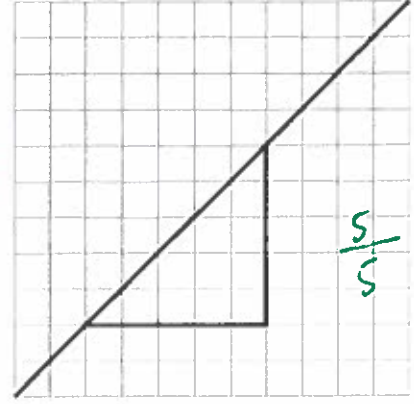
Here are several lines.



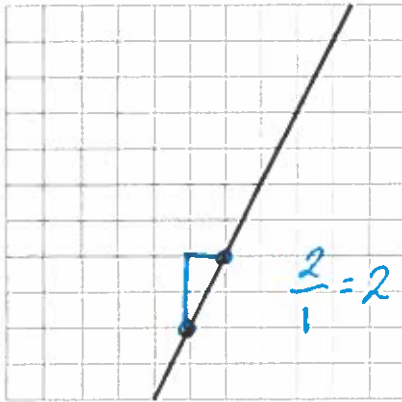
A



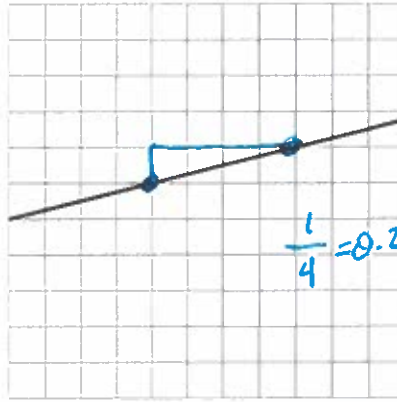
B



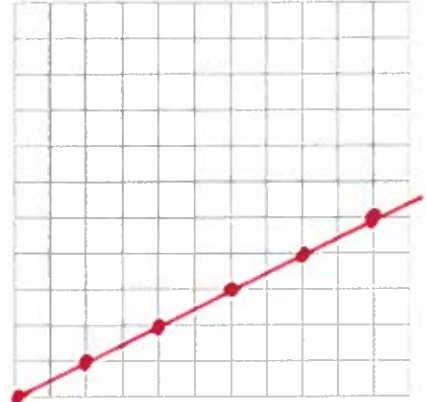
C



D



E



F

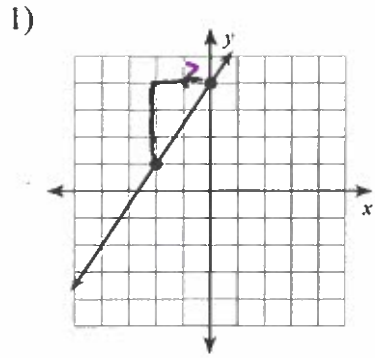
- Match each line shown with a slope from this list: $\frac{1}{3}$, 2, 1, 0.25, $\frac{3}{2}$, $\frac{1}{2}$.
- One of the given slopes does not have a line to match. Draw a line with this slope on the empty grid (F).

These four triangles are all examples of *slope triangles*. One side of a slope triangle is on the line, one side is vertical, and another side is horizontal. The **slope** of the line is the quotient of the length of the vertical side and the length of the horizontal side of the slope triangle. This number is the same for *all* slope triangles for the same line because all slope triangles for the same line are similar.

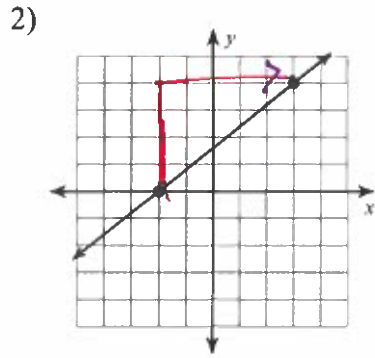
Finding Slope from a Graph

Find the slope of each line.

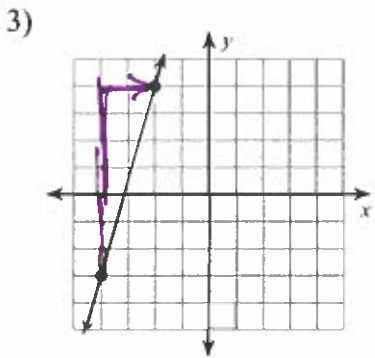
$$\frac{\Delta Y}{\Delta X} = \frac{\text{Rise}}{\text{Run}}$$



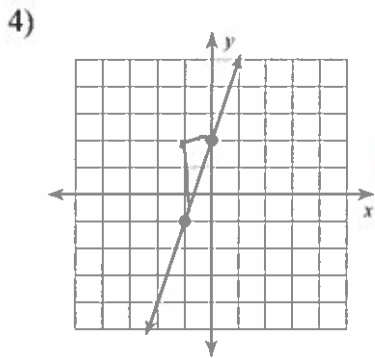
$$\frac{\Delta Y}{\Delta X} = \frac{3}{2}$$



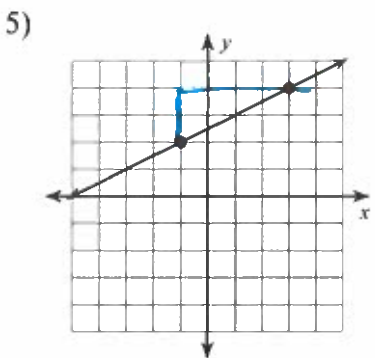
$$\frac{\Delta Y}{\Delta X} = \frac{\text{Rise}}{\text{Run}} = \frac{4}{5}$$



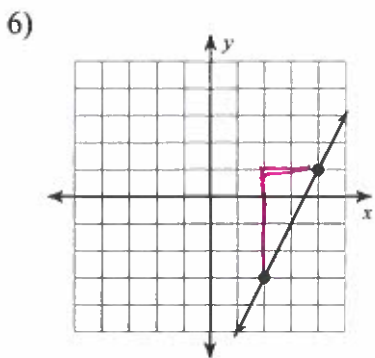
$$\frac{\Delta Y}{\Delta X} = \frac{7}{2}$$



$$\frac{\Delta Y}{\Delta X} = \frac{3}{1} \text{ or } 3$$



$$\frac{\Delta Y}{\Delta X} = \frac{1}{4} = \frac{1}{4}$$



$$\frac{\Delta Y}{\Delta X} = \frac{2}{1} = 2 \text{ or } 2$$