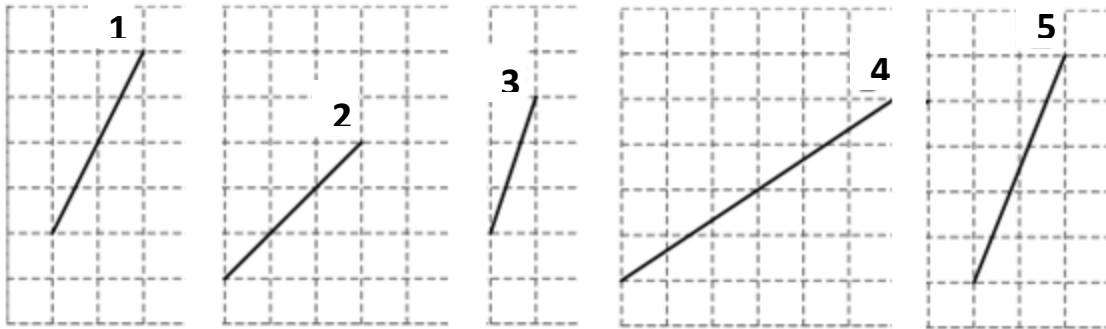


Name: \_\_\_\_\_

Period: \_\_\_\_\_

# Steepness

1. Five line segments 1, 2, 3, 4, 5 are shown below.



a. Put them in order of steepness. (Write letters in the boxes).

Least Steep = .....	.....	.....	.....	.....	Most Steep = .....
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b. Explain your method.

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c. What do we need to find to determine how steep a line is?

d. How do we find the slope of a line given a graph?

e. How do we find the slope of a line given two points?

f. How do we determine which line is most steep?

2. Five line segments **A**, **B**, **C**, **D**, and **E** are drawn between the following pairs of coordinates.

<b>A</b>	Between $(-3, 1)$ and $(0, 3)$
<b>B</b>	Between $(-1, 1)$ and $(-2, -1)$
<b>C</b>	Between $(1, 3)$ and $(-1, 0)$
<b>D</b>	Between $(1, -1)$ and $(3, 1)$
<b>E</b>	Between $(1, 0)$ and $(-2, -3)$

a. Put the line segments in order of how steep they are.

Least steep = .....	.....	.....	.....	Most steep = .....
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Show your work below:

b. Explain your work and how you know your slopes in the table are correct.

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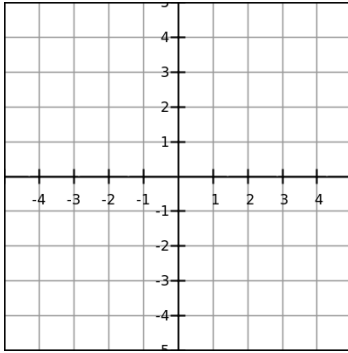
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c. How can you check your slopes in part 2a? \_\_\_\_\_

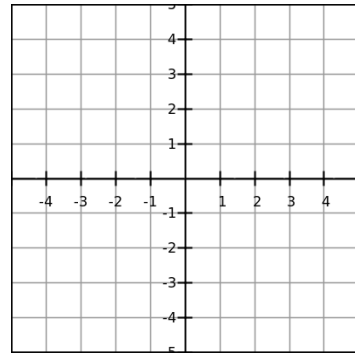
3a. Graph each line below by plotting the two points and connecting the dots.

**LINE A**



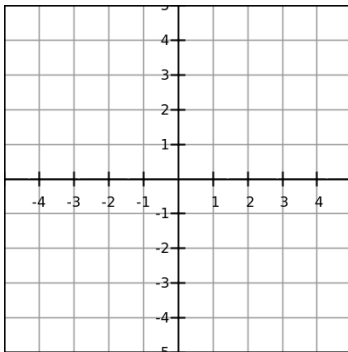
$$\frac{\text{rise}}{\text{run}} =$$

**LINE B**



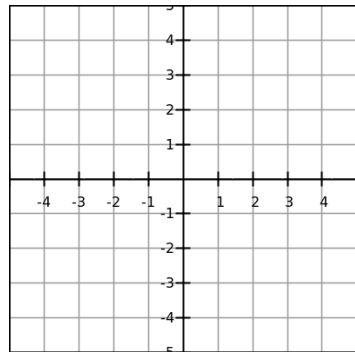
$$\frac{\text{rise}}{\text{run}} =$$

**LINE C**



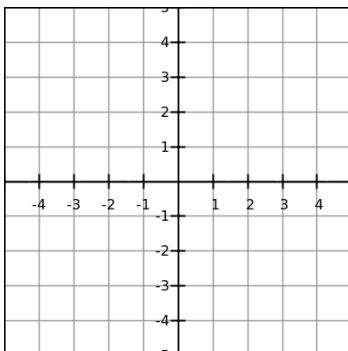
$$\frac{\text{rise}}{\text{run}} =$$

**LINE D**



$$\frac{\text{rise}}{\text{run}} =$$

**LINE E**



$$\frac{\text{rise}}{\text{run}} =$$

b. Put the line segments in order of how steep they are.

Least steep = .....	.....	.....	.....	Most steep = .....
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c. Does this match your answer in part 2a? \_\_\_\_\_

What does that tell you? \_\_\_\_\_

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4. Write the equation of each line below in slope-intercept form ( $y = mx + b$ ). Show your work.

a. Equation of Line A: \_\_\_\_\_  
\_\_\_\_\_

b. Equation of Line B: \_\_\_\_\_

c. Equation of Line C: \_\_\_\_\_

d. Equation of Line D: \_\_\_\_\_

e. Equation of Line E: \_\_\_\_\_

f. Explain how you found the equation of each line. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

g. Using a DIFFERENT method than what you described above, find the equation of Line A in slope-intercept form ( $y = mx + b$ ). Show your work.

**h. Which method do you prefer? Why?**

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