

Day 24: Slope and Graphing Slope-Intercept Form

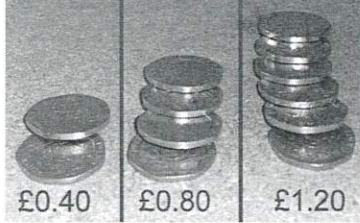
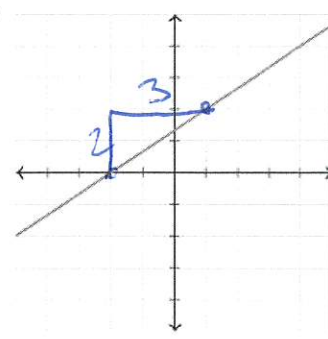
#24

1. **Summarize in words** how you can **calculate slope** between give the following situation (see one of the worksheets from **Day 22** to help).

In your explanation, use some of the vocabulary we have learned such as **rate of change**, **change in ____**, **difference**, **rise/run**, etc.

<p>Situation</p> <p>The amount the changes each time</p> <p>"each" "per" "forever"</p>	<p>Pattern</p> <p>The amount of new tiles for each pattern</p>	<p>Graph</p> <p>rise / run with a slope triangle</p>	<p>Table</p> $\frac{\Delta y}{\Delta x}$	<p>Given just two points on a line</p> $\frac{y_2 - y_1}{x_2 - x_1}$
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2. Find/calculate the slope:

<p>a.</p>  <p>Slope: <u>0.40</u></p>	<p>b.</p>  <p>Slope: <u>2/3</u></p>	<p>c.</p> <table border="1" data-bbox="1055 1144 1282 1459"> <thead> <tr> <th>x</th> <th>y</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>7</td> </tr> <tr> <td>4</td> <td>5</td> </tr> <tr> <td>6</td> <td>3</td> </tr> <tr> <td>8</td> <td>1</td> </tr> </tbody> </table> <p>Slope: <u>$\frac{2-7}{2-4} = -1$</u></p>	x	y	2	7	4	5	6	3	8	1
x	y											
2	7											
4	5											
6	3											
8	1											
<p>d. Between these 2 points on a line: (5,8) and (-3,-6)</p> $\frac{-6-8}{-3-5} = \frac{-14}{-8} = \frac{-7}{-4} = \frac{7}{4}$												

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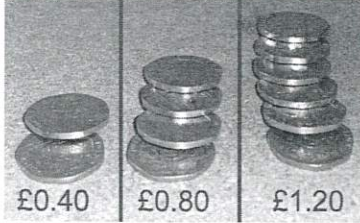
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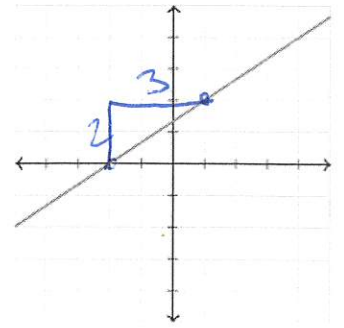
1. **Summarize in words** how you can **calculate slope** between give the following situation (see one of the worksheets from **Day 22** to help).

In your explanation, use some of the vocabulary we have learned such as **rate of change**, **change in ___**, **difference**, **rise/run**, etc.

Situation	Pattern	Graph	Table	Given just two points on a line
The amount the changes each time <i>"each"</i> <i>"per"</i> <i>"forever!"</i>	The amount of new tiles for each pattern	<i>rise</i> <i>run</i> with a slope triangle	$\frac{\Delta y}{\Delta x}$	$\frac{y_2 - y_1}{x_2 - x_1}$

2. Find/calculate the slope:

a.  Slope: 0.40

b.  Slope: $\frac{2}{3}$

c.

x	y
2	7
4	5
6	3
8	1

 Slope: $\frac{2}{2} = -1$

d. Between these 2 points on a line: (5,8) and (-3,-6)

$$\frac{-6-8}{-3-5} = \frac{-14}{-8} = \frac{-7}{-4} = \frac{7}{4}$$

3. Which situation above do you struggle with when calculating slope? What do you need to remind yourself about how to calculate slope in that situation?

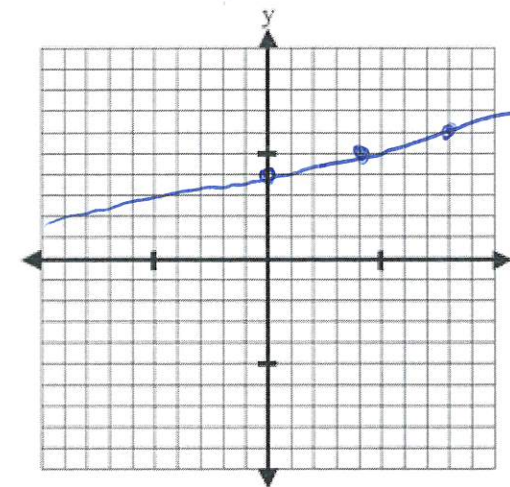
Answers vary.

Graphing Practice: Identify the slope and y-intercept of each line below. Then, graph each line. (SLOPE IS A RATIONAL NUMBER!)

4. $y = \frac{1}{4}x + 4$

slope (m) = $\frac{1}{4}$

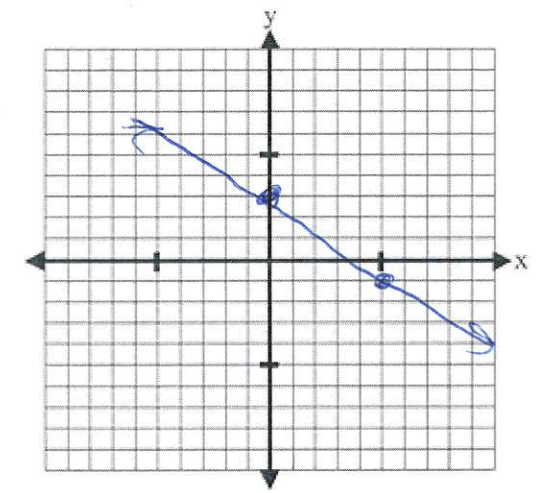
y-int (b) = 4



5. $y = -\frac{4}{5}x + 3$

slope (m) = $-\frac{4}{5}$

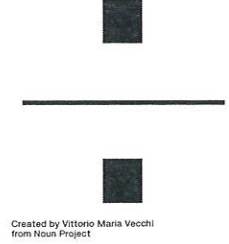
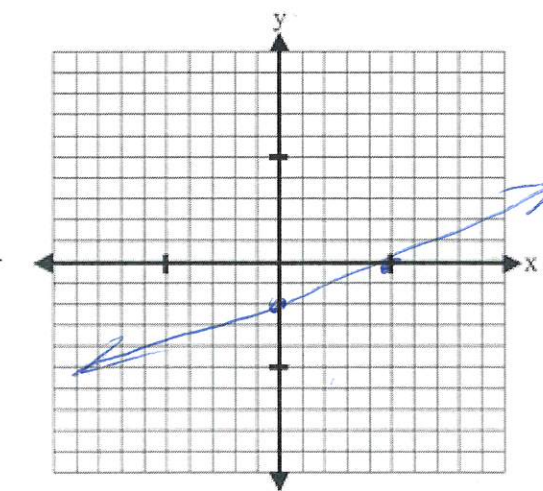
y-int (b) = 3



6. $y = \frac{2}{5}x - 2$

slope (m) = $\frac{2}{5}$

y-int (b) = -2

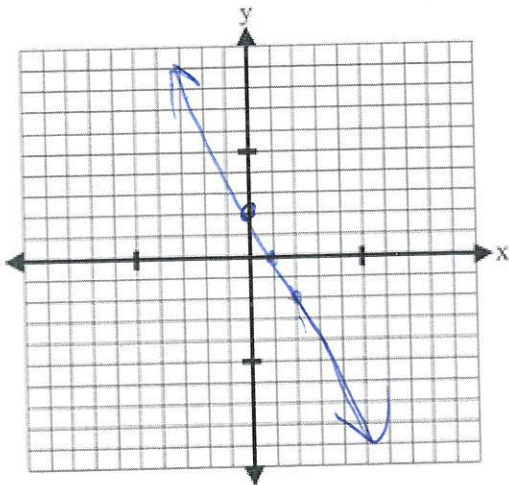


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7. $y = 2 - 2x$

slope (m) = -2

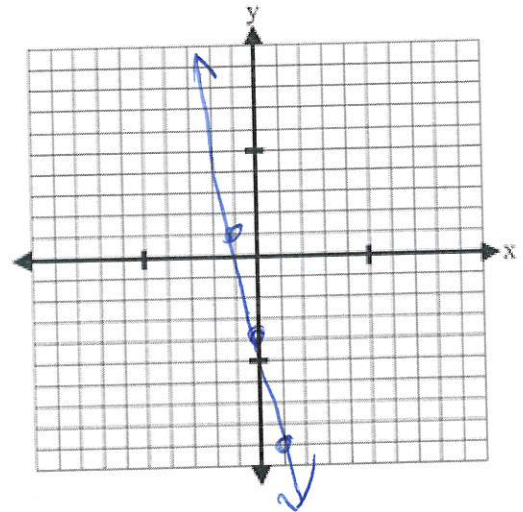
y-int (b) = 2



8. $y = -5x - 4$

slope (m) = -5

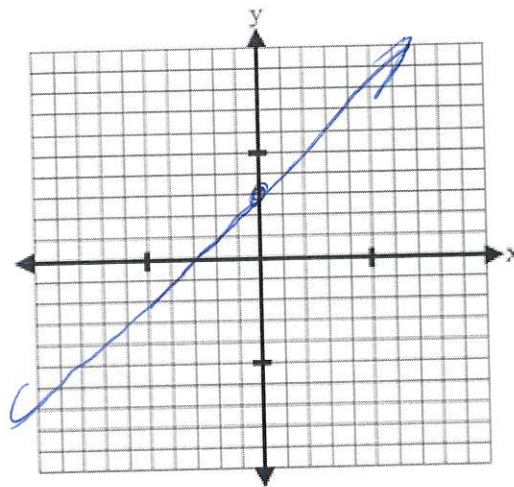
y-int (b) = -4



9. $y = 3 + x$

slope (m) = 1

y-int (b) = 3



10. You are snapchatting with a friend who's struggling with graphing an equation in slope-intercept form ($y = mx + b$), for example $y = -4x + 5$. What steps and hints would you tell them?

Start with "b". Put a dot on the y-axis. Then look at "m". IF it's a fraction, do $\frac{\text{rise}}{\text{run}}$. IF it's not, do $\frac{\text{rise}}{\text{one}}$.

