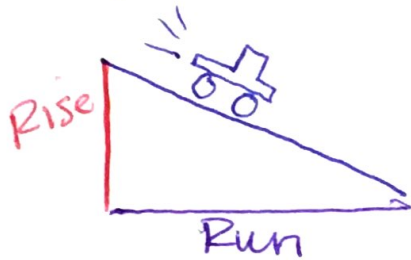
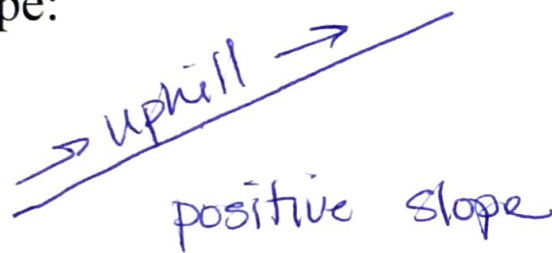


Vocabulary:

- Slope: steepness of a line

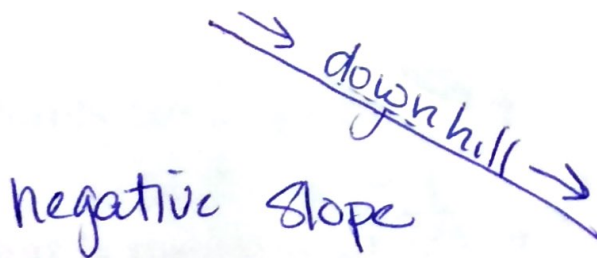


- Positive Slope:



Left to Right

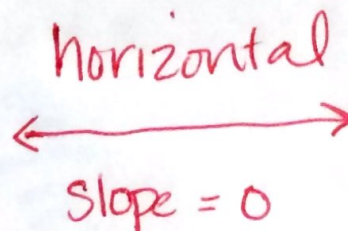
- Negative Slope:



Left to Right

- Slope Formula:

$$\frac{\text{Rise}}{\text{Run}}$$



$$\frac{y_2 - y_1}{x_2 - x_1}$$

$$\frac{0}{2} = 0 \quad \frac{0}{3} = 0$$

$$\frac{14}{0} = \text{undefined}$$

Use the points marked on Graph A to answer questions 1-4.

1. What is the slope of \overrightarrow{AB} ?

$+\frac{3}{2}$

2. What is the slope of \overrightarrow{CB} ?

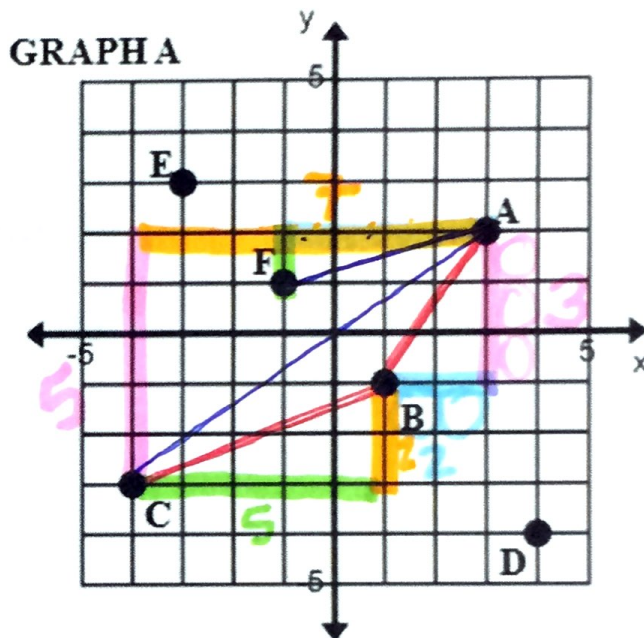
$+\frac{2}{5}$

3. What is the slope of \overrightarrow{AC} ?

$+\frac{5}{7}$

4. What is the slope of \overrightarrow{AF} ?

$+\frac{1}{4}$



Use Graph B to answer questions 5-8.

5. What is the slope of \overrightarrow{GH} ?

$-\frac{1}{6}$

6. What is the slope of \overrightarrow{PQ} ?

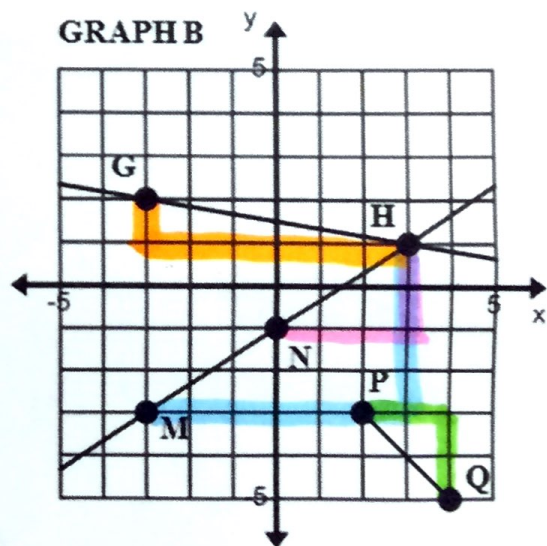
$-\frac{2}{2} = -1$

7. What is the slope of \overrightarrow{HN} ?

$\frac{2}{3}$

8. What is the slope of \overrightarrow{HM} ?

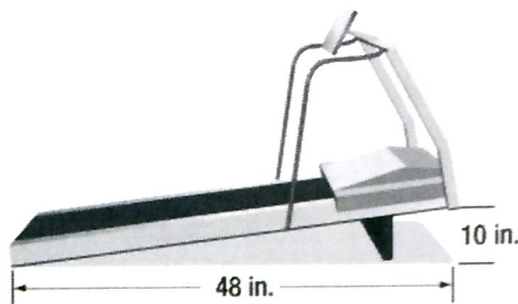
$\frac{4}{6} = \frac{2}{3}$



Find the slope of the treadmill.

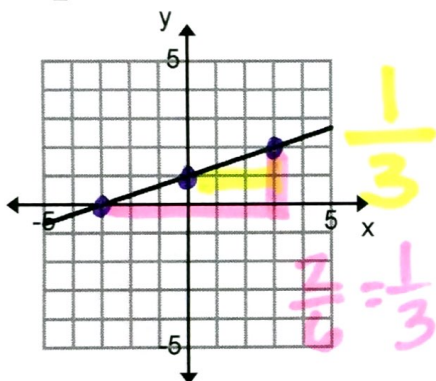
9.

$$\frac{10}{48} = \frac{5}{24}$$

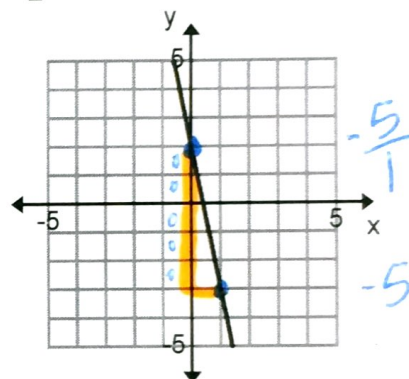


Pick two points on the line and find the slope.

10.



11.



Use the slope formula to calculate the slope without graphing.

12. $(0,1)$ and $(-5,-2)$

$$\frac{-2 - 1}{-5 - 0} = \frac{-3}{-5} = \frac{3}{5}$$

13. $(-2,3)$ and $(2,5)$

$$\frac{3 - 5}{-2 - 2} = \frac{-2}{-4} = \frac{1}{2}$$

14. $(4,4)$ and $(2,-4)$

$$\frac{4 - (-4)}{4 - 2} = \frac{8}{2} = 4$$

15. $(-2,0)$ and $(1,-3)$

$$\frac{0 - (-3)}{-2 - 1} = \frac{3}{-3} = -1$$

Use the tables to find the slope of the line that contains the following points.

16.

x	y
3	8
5	2
7	-4

$(3,8)$ $(5,2)$ } $(5,2)$ $(7,-4)$ } $(3,8)$ $(7,-4)$
 $\frac{8-2}{3-5} = \frac{6}{-2} = -3$ } $\frac{2-(-4)}{5-7} = \frac{6}{-2} = -3$ } $\frac{8-(-4)}{3-7} = \frac{12}{-4} = -3$

17.

x	-3	-2	0
y	6	-1	-15

$(-3,6)$ $(-2,-1)$ $(0,-15)$

$$\frac{6-(-1)}{-3-(-2)} = \frac{7}{-1} = -7$$