

Simplify.

1. $\frac{10-2}{3-1}$

2. $\frac{4-2}{9-1} = \frac{2}{8} = \frac{1}{4}$

3. $\frac{5-1}{15-3}$

4. $\frac{11-3}{14-4}$

5. $\frac{-4-2}{5-3}$

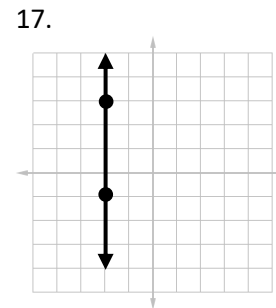
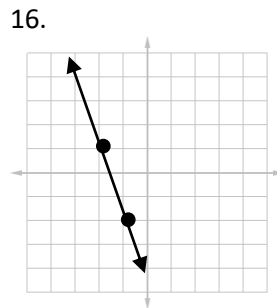
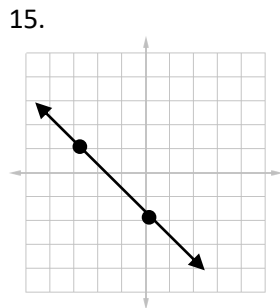
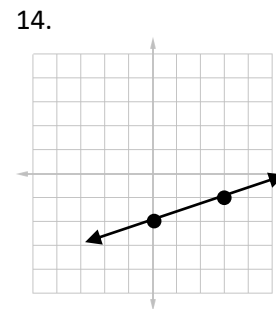
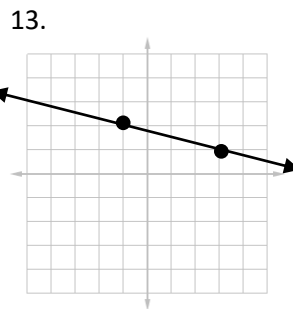
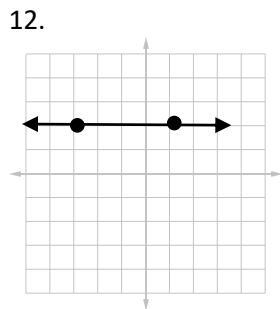
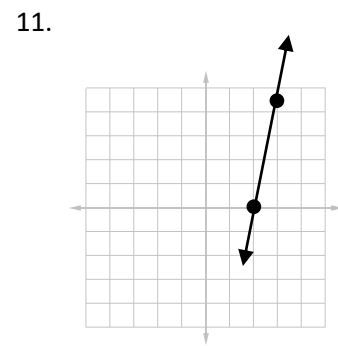
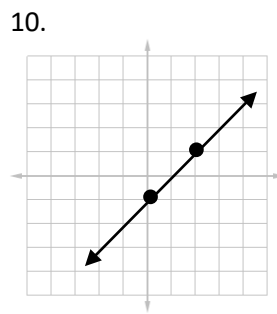
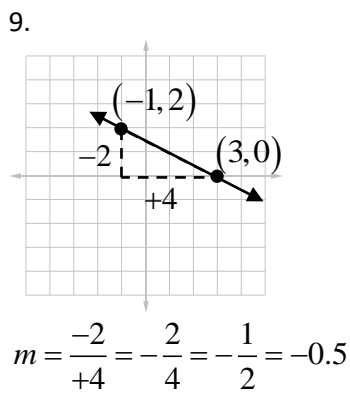
6. $\frac{1-3}{-1-1}$

7. $\frac{-4-5}{7-1}$

8. $\frac{-10-2}{-3-1}$

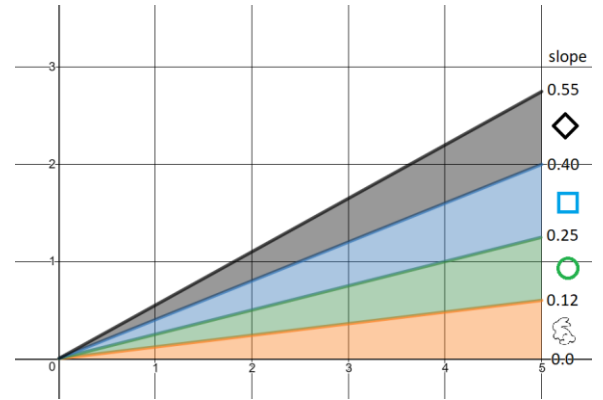
Label the (x,y) coordinate of each point.

Find the **slope** between the two points (express this as a ratio). $slope = m = \frac{RISE}{RUN} = \frac{+\uparrow -\downarrow}{+\rightarrow -\leftarrow}$



Ski trail difficulty at a local ski resort are rated as follows:

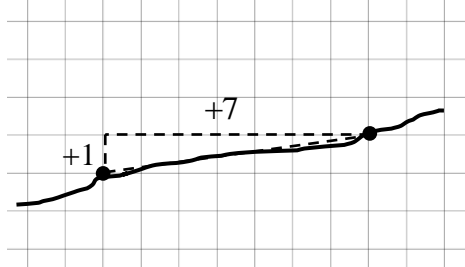
Difficulty	Code	Slope Range (decimal)
Bunny	Bunny	0 to 0.12
Beginner	Green Circle	0.13 to 0.25
Intermediate	Blue Square	0.26 to 0.40
Difficult	Black Diamond	0.41 to 0.55



Classify each of the following ski trails according to the **steepness (absolute value of their slope)**

You may use a calculator but must show your work.

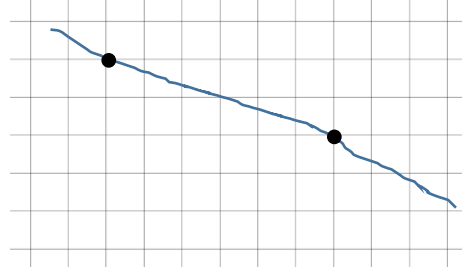
18.



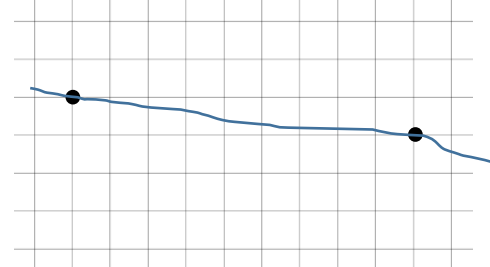
$$m = \frac{+1}{+7} \rightarrow \left| \frac{1}{7} \right| \approx 0.142$$

beginner

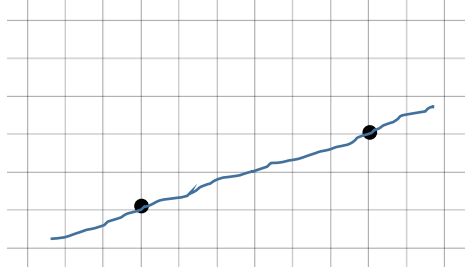
19.



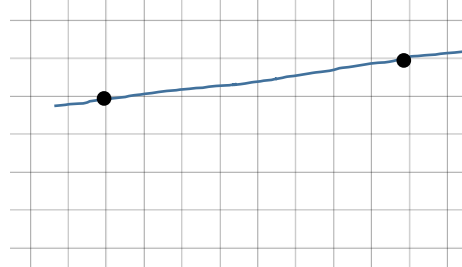
20.



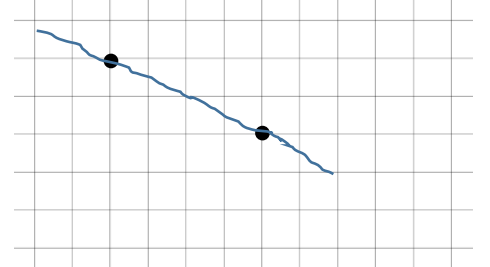
21.



22.



23.



24. Trails actually have varying slopes and are categorized by the steepest part of the trail.

a) Find the **steepness** of all of the different parts of the trail as decimals.

b) Categorize the trail based on the steepest part of the trail.

c) Which part of the trail would you enjoy the most? Why?

