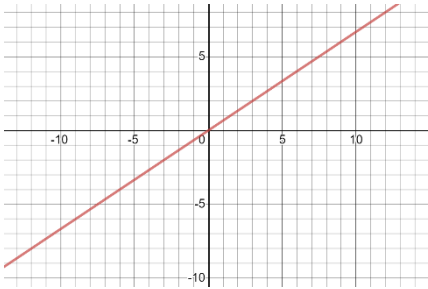
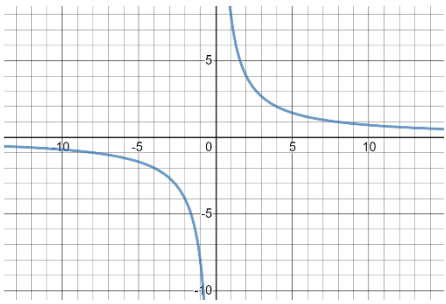


Variation

Variation (A1.8)

	Direct	Indirect (Inverse)
Description	Variables move in same direction As x increase, y increases As x decreases, y decreases	Variables move in opposite directions As x increases, y decreases As x decreases, y increases
Constant of variation, k	Found by dividing y by x	Found by multiplying x and y
Equation	$y = kx$	$y = \frac{k}{x}$
Graph		
Graph Characteristics	Graph is a line Must go through the origin!!! (0,0) The constant of variation, k, is also the slope of the line	Cannot include the origin!!! (0,0) Not a line

Desmos Tip:

1. Given a table? Add it to Desmos and interpret the results. (see graph characteristics)
Compare to your answer choices by typing them into Boxes “1”-“4”
2. Asked to graph points on a Direct Variation? Always use (0,0) !!!!

Variation

Guided Practice

A relation is shown in the table below.

x	y
-3	-6
-2.5	-7.2
4	4.5
6	3

Which of the following statements is true?

- A. The relation is a direct variation because $xy = 18$
- B. The relation is a direct variation because $y = \frac{1}{2}x$
- C. The relation is an inverse variation because $xy = 18$
- D. The relation is an inverse variation because $y = \frac{1}{2}x$

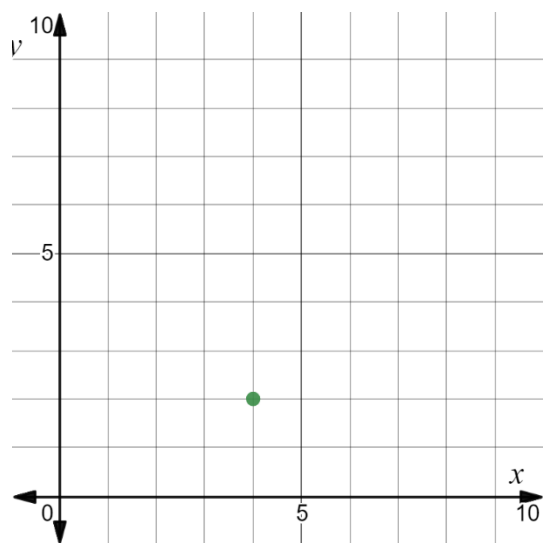
A relation is shown in the table below.

x	y
5	6
8	9.6
10	12
15	18

Which of the following statements is true?

- A. The relation is a direct variation because $xy = 30$
- B. The relation is a direct variation because $y = 1.2x$
- C. The relation is an inverse variation because $xy = 30$
- D. The relation is an inverse variation because $y = 1.2x$

The point shown is an element of a direct variation. Plot two points other than the point shown, that are also elements of the direct variation



The relation shown is an inverse variation. Write the equation that represents the variation.

$$\left\{ (3, 4), \left(\frac{1}{2}, 24 \right), (-6, -2), \left(18, \frac{2}{3} \right) \right\}$$