

Class Name : **8B - B**Instructor Name : **Ms. Ryan**

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

Instructor Note : \_\_\_\_\_

1. Suppose that  $y$  varies directly with  $x$ , and  $y = 20$  when  $x = 16$ .

(a) Write a direct variation equation that relates $x$ and $y$ .
Equation:
(b) Find $y$ when $x = 5$ .
$y =$

2. Suppose that  $y$  varies directly with  $x$ , and  $y = 3$  when  $x = 15$ .

(a) Write a direct variation equation that relates $x$ and $y$ .
Equation:
(b) Find $y$ when $x = 10$ .
$y =$

3. Suppose that  $y$  varies directly with  $x$ , and  $y = 8$  when  $x = 20$ .

(a) Write a direct variation equation that relates $x$ and $y$ .
Equation:
(b) Find $y$ when $x = 7$ .
$y =$

4. Suppose that  $y$  varies directly with  $x$ , and  $y = -8$  when  $x = 2$ .

(a) Write a direct variation equation that relates $x$ and $y$ .
Equation:
(b) Find $y$ when $x = 5$ .
$y =$

5. For each equation, determine whether it shows a direct variation (that is, shows directly proportional variables).

If it does, find the constant of variation and write it in simplest form.

$6x + 5y = -6$ <input type="radio"/> Direct variation Constant of variation: $k = \square$ <input type="radio"/> Not direct variation
$15x - 3y = 0$ <input type="radio"/> Direct variation Constant of variation: $k = \square$ <input type="radio"/> Not direct variation

6. For each equation, determine whether it shows a direct variation (that is, shows directly proportional variables).

If it does, find the constant of variation and write it in simplest form.

$$4y = 5x$$

Direct variation

Constant of variation:  $k = \square$

Not direct variation

$$-8x = 3y - 5$$

Direct variation

Constant of variation:  $k = \square$

Not direct variation

7. For each equation, determine whether it shows a direct variation (that is, shows directly proportional variables).

If it does, find the constant of variation and write it in simplest form.

$$12y = -3x$$

Direct variation

Constant of variation:  $k = \square$

Not direct variation

$$-3x + 2y = 9$$

Direct variation

Constant of variation:  $k = \square$

Not direct variation

8. For each equation, determine whether it shows a direct variation (that is, shows directly proportional variables).

If it does, find the constant of variation and write it in simplest form.

$$8y = 5x$$

Direct variation

Constant of variation:  $k = \square$

Not direct variation

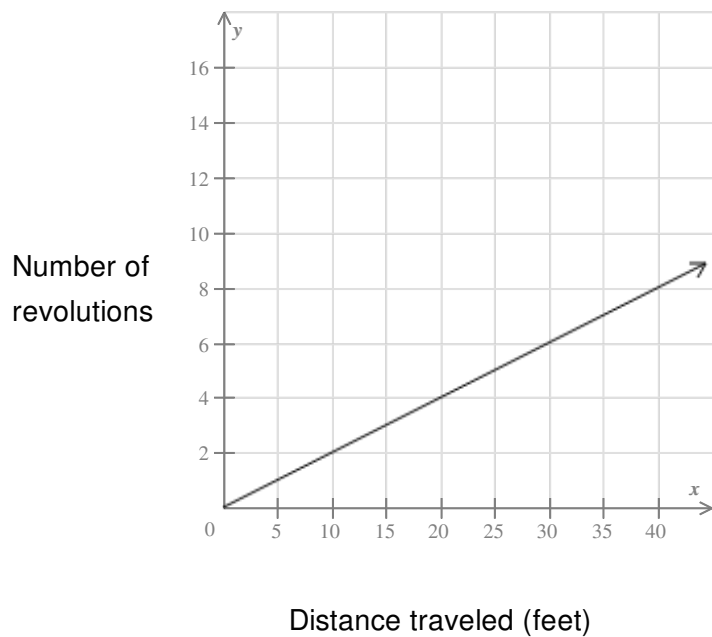
$$5x - 2y = 0$$

Direct variation

Constant of variation:  $k = \square$

Not direct variation

9. Jessica is riding her bike. The number of revolutions (turns) her wheels make varies directly with the distance she travels. See the graph below.

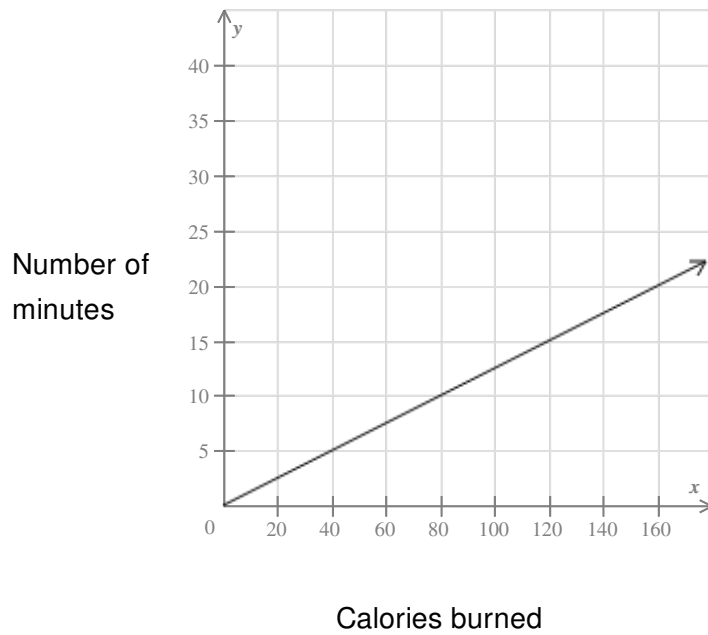


(a) How far does Jessica travel per revolution?

feet

(b) What is the slope of the graph?

10. Linda is walking. The number of minutes she has walked varies directly with the number of calories she has burned. See the graph below.



(a) How many minutes does Linda walk per calorie burned?

minute(s)

(b) What is the slope of the graph?