

Class Name : **8A - A**

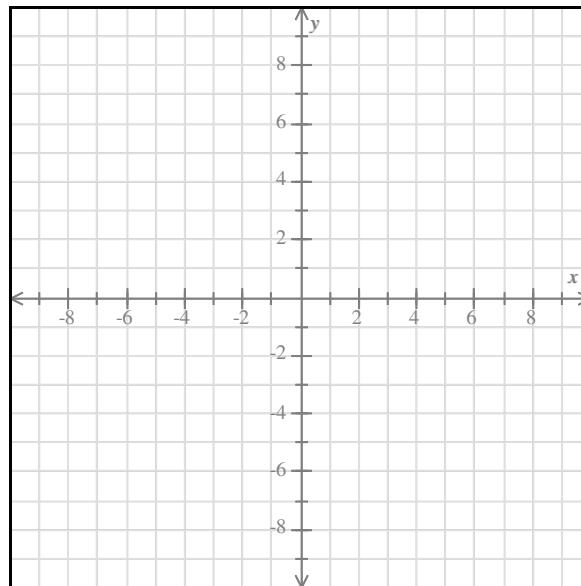
Instructor Name : **Ms. Ryan**

Student Name : _____

Instructor Note :

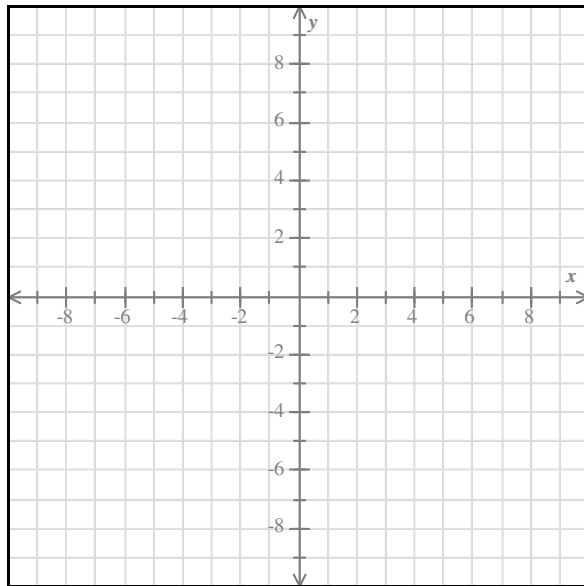
1. Graph the line.

$$y = \frac{3}{2}x$$



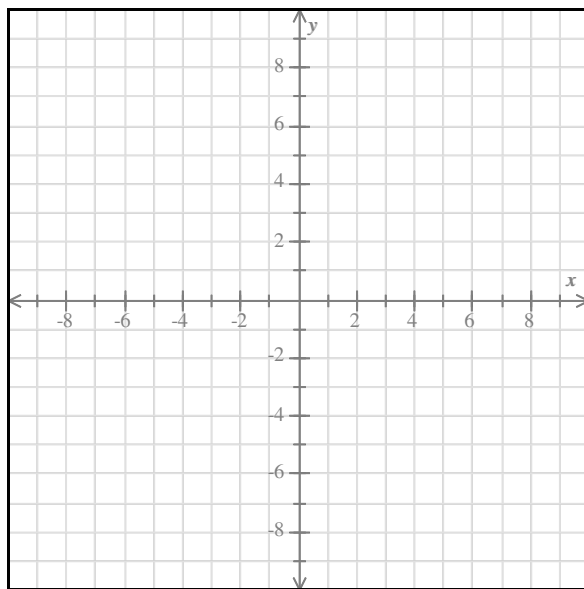
2. Graph the line.

$$y = 2x$$



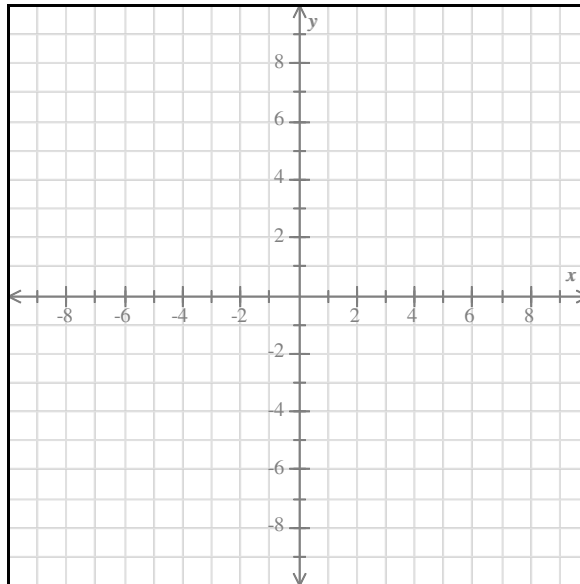
3. Graph the line.

$$y = -4x$$



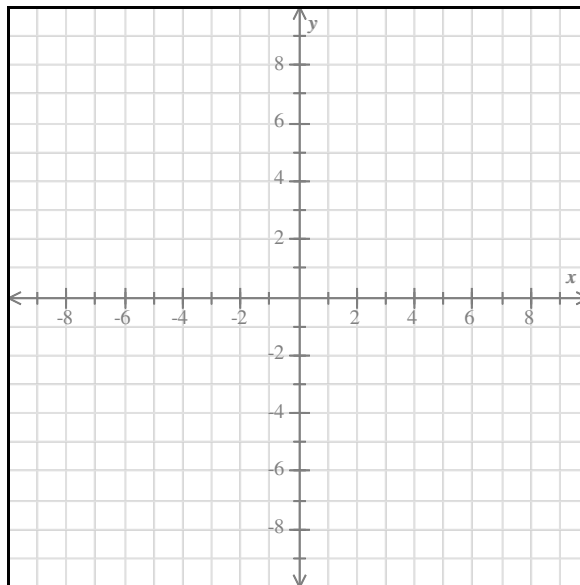
4. Graph the line.

$$y = \frac{1}{3}x$$

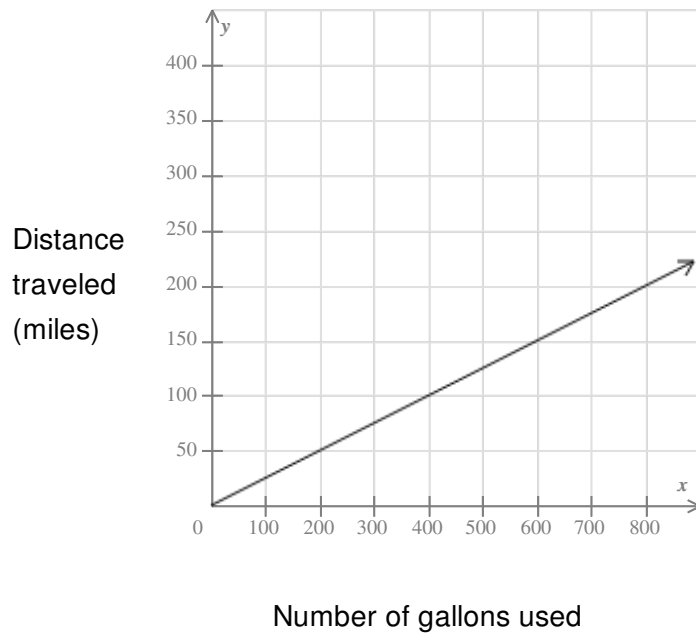


5. Graph the line.

$$y = x$$



6. A freight train is carrying goods across the country. The distance it has traveled varies directly with the number of gallons of fuel it has used. See the graph below.

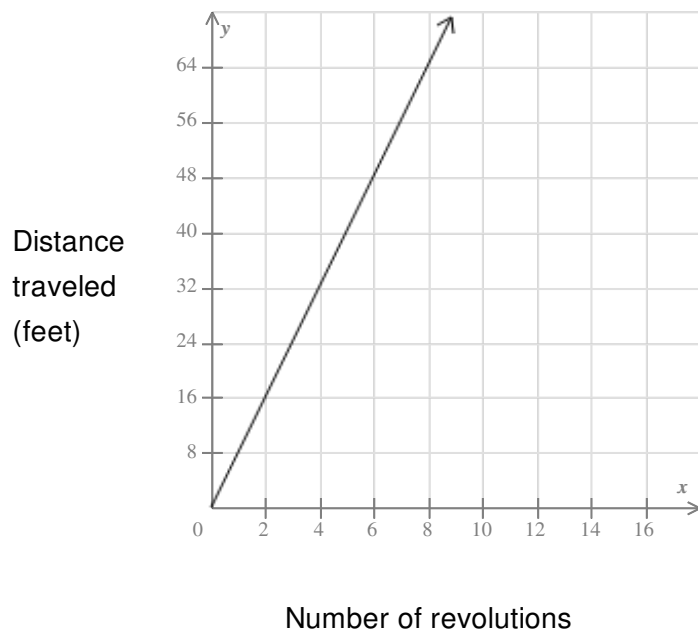


(a) How many gallons does the train use per mile?

gallon(s)

(b) What is the slope of the graph?

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

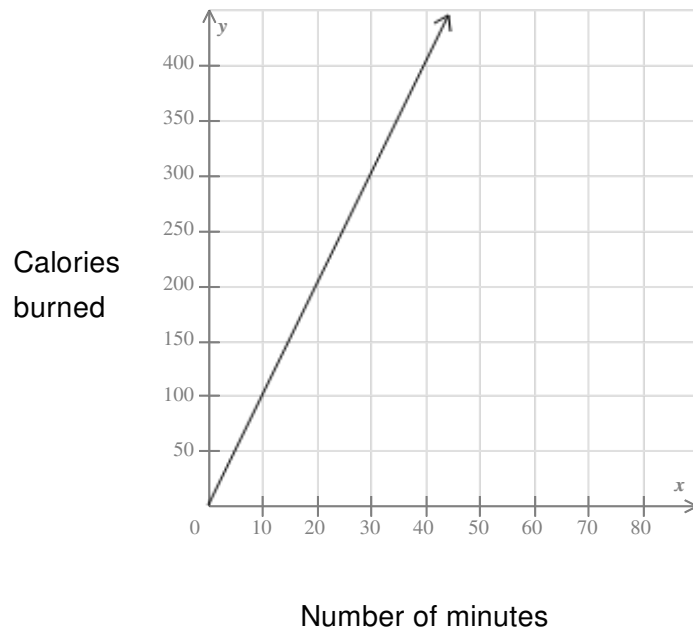


(a) How far does Laura travel per revolution?

feet

(b) What is the slope of the graph?

8. Debra is running. The number of calories she has burned varies directly with the number of minutes she has run. See the graph below.



- (a) How many minutes does Debra run per calorie burned?

minute(s)

- (b) What is the slope of the graph?

9. Suppose that y varies directly with x , and $y = 21$ when $x = 3$.

(a) Write a direct variation equation that relates x and y .
Equation:
(b) Find y when $x = -2$.
$y =$

10. 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 $x = 7$.
$y =$

11. Suppose that y varies directly with x , and $y = 15$ when $x = 6$.

(a) Write a direct variation equation that relates x and y .
Equation:
(b) Find y when $x = 8$.
$y =$

12. Suppose that y varies directly with x , and $y = 2$ when $x = 16$.

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

13. 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.

$$5x - 8y = 0$$

Direct variation

Constant of variation: $k = \square$

Not direct variation

$$4y = 5x$$

Direct variation

Constant of variation: $k = \square$

Not direct variation

14. 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.

$$-5y = -2x$$

Direct variation

Constant of variation: $k = \square$

Not direct variation

$$5x + 4y = -9$$

Direct variation

Constant of variation: $k = \square$

Not direct variation

15. 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.

$$4x = 3y - 7$$

Direct variation

Constant of variation: $k = \square$

Not direct variation

$$2y = 16x$$

Direct variation

Constant of variation: $k = \square$

Not direct variation