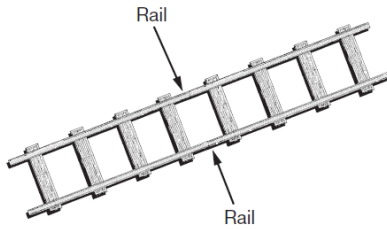


Review and EQAO Practice for Chapter 6 – Analyze Linear Relations

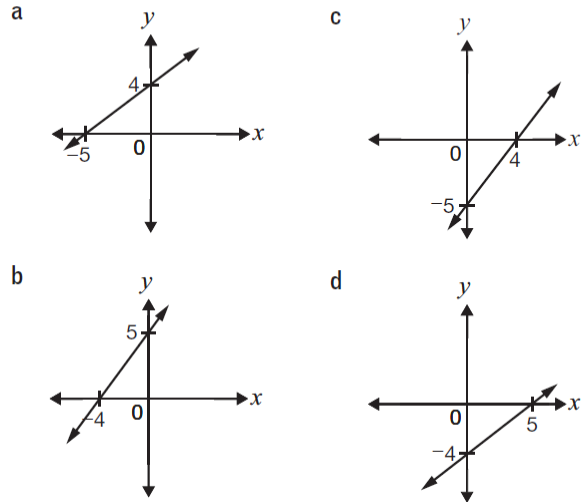
- 2018 16** The path of one of the rails of a train track can be represented by the equation $y = \frac{2}{3}x + 1$.



Which equation could represent the path of the second rail?

- a $y = -\frac{3}{2}x + 3$
- b $y = -\frac{2}{3}x + 3$
- c $y = \frac{2}{3}x + 3$
- d $y = \frac{3}{2}x + 3$

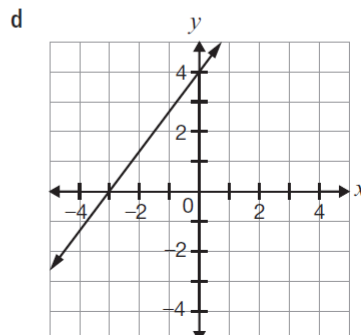
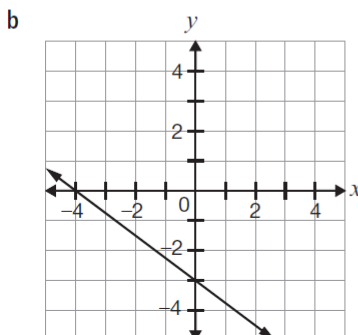
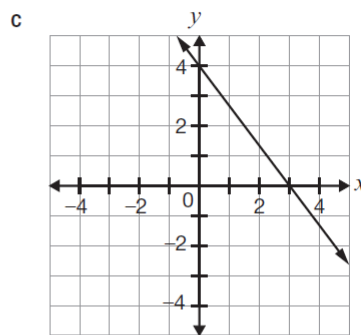
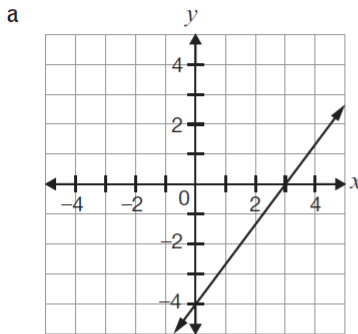
- 2018 17** Using the x - and y -intercepts, select the graph that represents $4x - 5y = -20$.



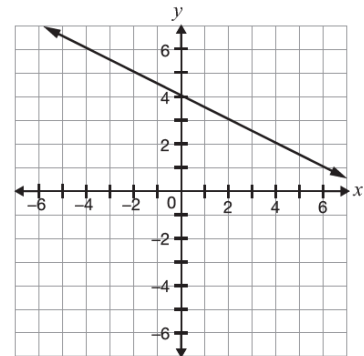
- 2017 15** What are the slope and the y -intercept of the line represented by $3x - 2y + 6 = 0$?

- a $\frac{3}{2}, 3$
- b $\frac{3}{2}, 6$
- c $\frac{2}{3}, 2$
- d $\frac{2}{3}, 3$

- 2016 16** Which graph shows a line that is perpendicular to the line $y = \frac{4}{3}x - 4$?



- 2017 16** A line is shown on the grid below.



Which of the following equations represents a line that is **perpendicular** to the line on the grid?

- a $y = -2x - 4$
- b $y = 2x + 4$
- c $y = -\frac{1}{2}x - 4$
- d $y = \frac{1}{2}x + 4$

- 2016** **17** What is an equation of the line
- perpendicular to the line represented by $y = -\frac{3}{2}x + 1$ and
 - with the same y -intercept as the line represented by $y = 7 + 5x$?

- a $y = \frac{2}{3}x + 7$
- b $y = \frac{2}{3}x + 5$
- c $y = -\frac{2}{3}x + 7$
- d $y = -\frac{2}{3}x + 5$

- 2015** **19** Which equation does **not** represent a linear relation?

- a $y = 0$
- b $x = 5$
- c $x^2 + y = 9$
- d $2x + y - 5 = 0$

- 2014** **15** The equation of a line is $5x - 2y + 10 = 0$. Which of the following expresses this equation in the form $y = mx + b$?

- a $y = \frac{5}{2}x + 5$
- b $y = \frac{5}{2}x + 10$
- c $y = -\frac{5}{2}x + 5$
- d $y = -\frac{5}{2}x + 10$

- 2013** **15** Which of the following equations is equivalent to $3x - 5y = 45$?

- a $y = \frac{3}{5}x - 9$
- b $y = -\frac{3}{5}x + 9$
- c $y = 3x - 45$
- d $y = -3x + 45$

- 2015** **20** What is the slope of the line represented by the equation below?

$$0 = 2x - 10y + 7$$

- a 5
- b $\frac{1}{5}$
- c $-\frac{1}{5}$
- d -5

- 2013** **18** Which equation below represents a line that is perpendicular to the line represented by $y = 3x - 5$?

- a $y = 3x + \frac{1}{5}$
- b $y = -3x - \frac{1}{5}$
- c $y = -\frac{1}{3}x + 7$
- d $y = \frac{1}{3}x - 7$

2017 13 Related Relations

A new line

- is perpendicular to the line represented by $3x - y = 5$ and
- has the same y -intercept as the line represented by $4x - 3y - 12 = 0$.

Determine the equation of the new line.

Justify your answer.

2016 12 Standard Lines

Two lines are represented by the equations below.

Line 1: $x - 2y + 6 = 0$

Line 2: $3x + 6y - 18 = 0$

Determine which line could be represented by $y = -\frac{1}{2}x + 3$.

Circle one: Line 1 Line 2 Both

Justify your answer. Include information for both Line 1 and Line 2.

2015 13 Getting Fit

Maddie enrolls in a fitness program. Her total cost is made up of a sign-up fee and a cost per class. The table below shows information about her total cost, C , in dollars, when she attends n classes.

Number of classes, n	Total cost, C (\$)
12	67
14	74

What is the sign-up fee?

Sign-up fee: _____

Show your work.

Is the relationship between the number of classes Maddie attends and her total cost a partial variation or direct variation?

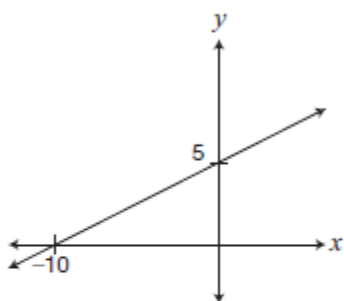
Circle one: Partial variation Direct variation

Justify your answer.

2015 15 Comparing Relationships

Information about three linear relationships is given below.

Relationship 1



Relationship 2

$$3x + 6y + 1 = 0$$

Relationship 3

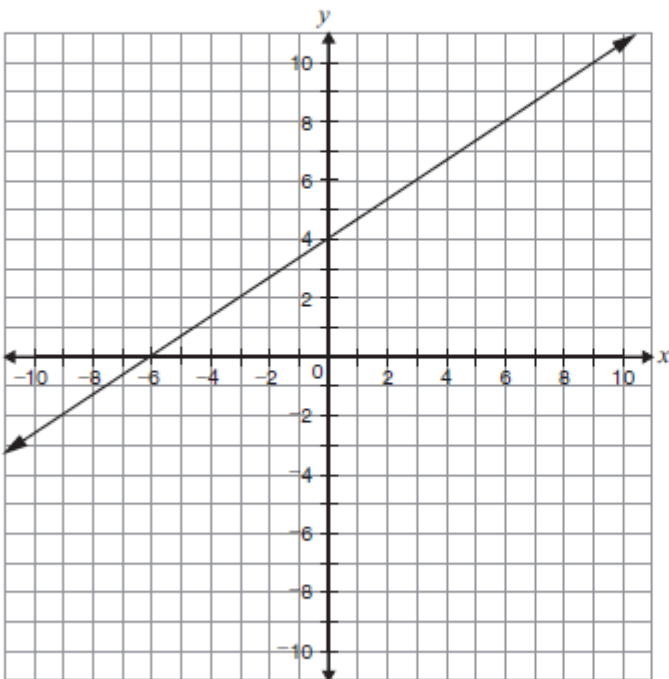
x	y
-2	-3
0	-2
2	-1
4	0

Circle the relationships that have the same rate of change.

Justify your answer. Include information about all three relationships.

2015 16 Making Equations!

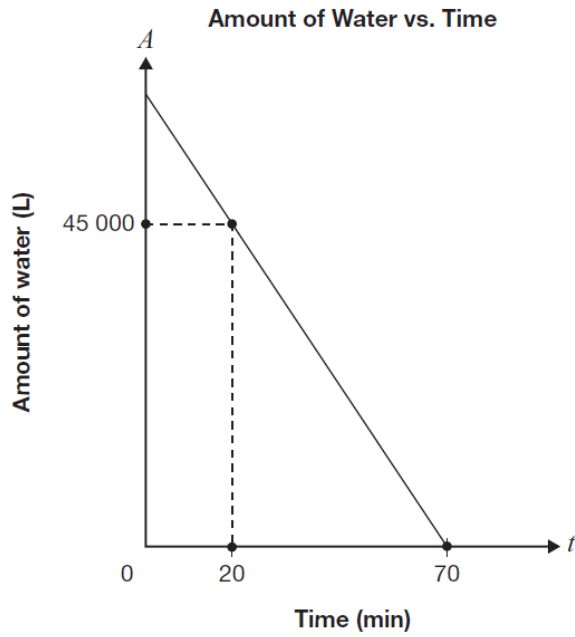
Determine the equation of the line that has the same y -intercept as $2x + y + 6 = 0$ and is perpendicular to the line shown on the grid.



Show your work.

2013 **14** Water in a Pool

The graph below represents the relationship between the amount of water, A , in a pool as it drains and time, t .



Determine the initial amount of water in the pool and the rate of change of this relation.

Show your work.