

Open-Response

12 More Snacks, Please!

Raisins and sunflower seeds are sold together in packages of 250 g. The ratio of the mass of raisins to the mass of sunflower seeds is 3 to 5.

Determine the mass of raisins in a package.

Show your work.

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.

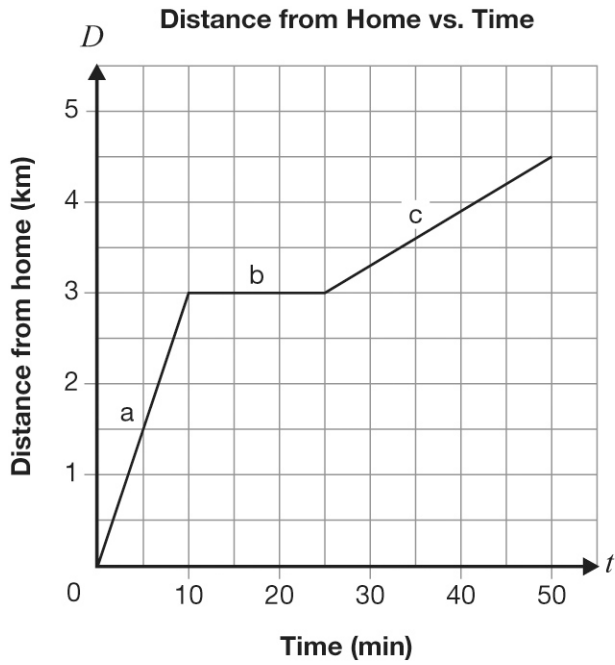
Is the relationship between the number of classes Maddie attends and her total cost a partial variation or direct variation?

Circle one: Partial variation Direct variation

Justify your answer.

14 Kenny's Big Adventure

The following graph represents the relationship between Kenny's distance from home on a bike ride and time.



Describe the 3 segments of Kenny's ride. Include information about distance travelled, time, direction and speed, in km/min, for each segment.

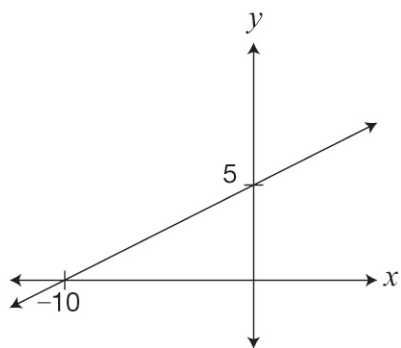
Segment	Distance travelled	Time	Direction	Speed (km/min)
a				
b				
c				

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Comparing Relationships

Information about three linear relationships is given below.

Relationship 1



Relationship 2

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

Relationship 3

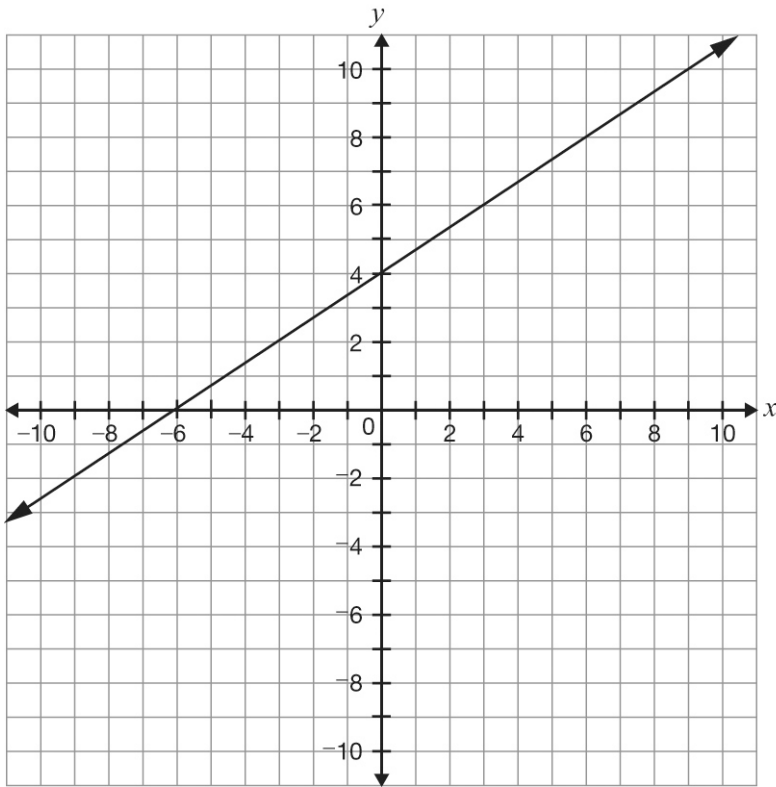
x	y
-2	-3
0	-2
2	-1
4	0

Circle the relationships that have the same rate of change.

Justify your answer. Include information about all three relationships.

16 Making Equations!

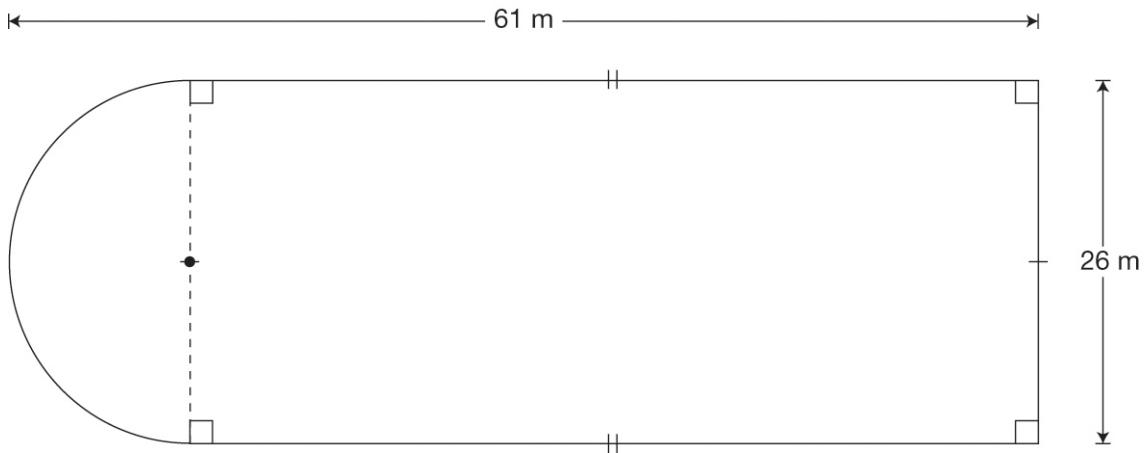
Determine the equation of the line that has the same y -intercept as $2x + y + 6 = 0$ and is perpendicular to the line shown on the grid.



Show your work.

17 Skate On!

A diagram of a community ice rink is shown below.



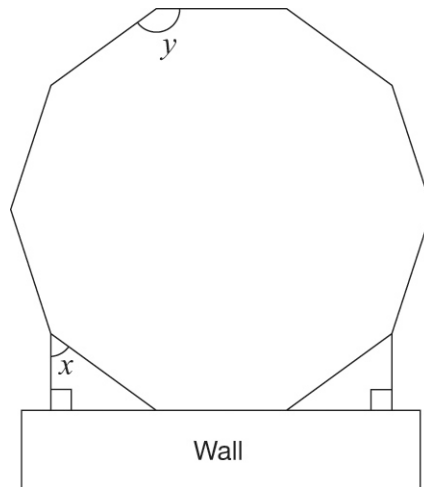
The rink is being enclosed with fencing that costs \$6.20/m.

Determine the total cost of fencing for the rink.

Show your work.

18 A Schoolyard

A schoolyard is in the shape of a regular decagon, as pictured below.



Complete the chart below with the values of x and y . Justify your answers using geometric properties.

Value	Justification using geometric properties
$x = \underline{\hspace{2cm}}$	
$y = \underline{\hspace{2cm}}$	