



Math Virtual Learning

6th Grade Math

**Analyzing the Relationship Between
Two-Variables**

April 20, 2020



6th Grade Math
Lesson: April 20, 2020

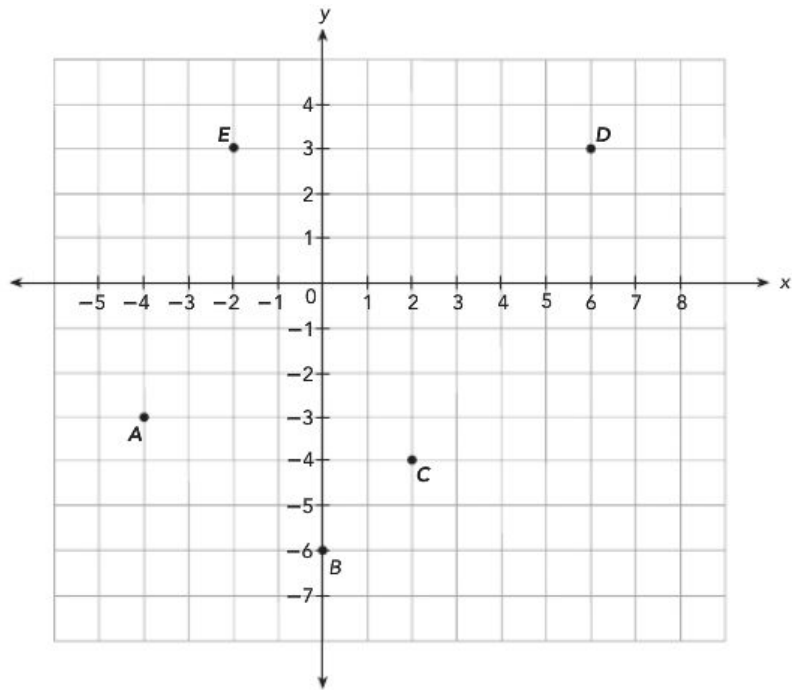
Objective/Learning Target:

Students will analyze the relationship between two variables using tables, graphs, and equations.

Bell Ringer:

Use the coordinate plane below.

- 1 Give the coordinates of points A , B , C , D , and E .

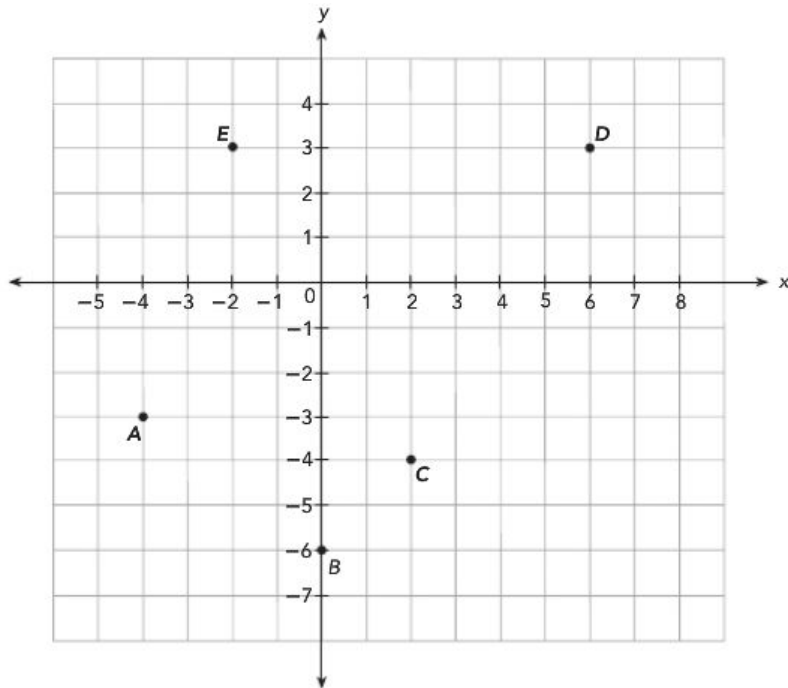


Use graph paper. Plot the points on a coordinate plane. In which quadrant is each point located?

- 2 $A(3, 5)$, $B(-2, 0)$, $C(7, -2)$, $D(0, -5)$, and $E(-3, -8)$

Use the coordinate plane below.

- 1 Give the coordinates of points A, B, C, D, and E.

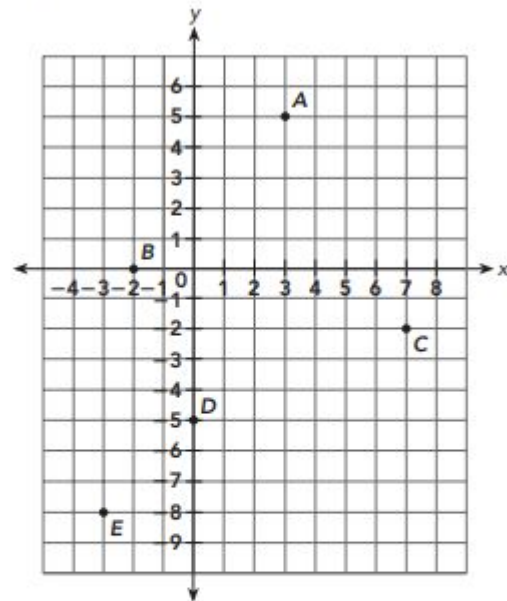


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- 2 A (3, 5), B (-2, 0), C (7, -2), D (0, -5), and E (-3, -8)

1. A (-4, -3); B (0, -6); C (2, -4);
D (6, 3); E (-2, 3)

2.



Quadrant I : Point A

Quadrant III : Point E

Quadrant IV : Point C

Point B lies on the x-axis. It lies
between Quadrant II and Quadrant III.

Point D lies on the y-axis. It lies
between Quadrant III and Quadrant IV.

Let's Get Started!

Watch This Video:



Learn:

Angela is driving to the Raccoon River. The distance traveled, d miles, after t hours, is given by $d = 40t$. Graph the relationship between d and t . Use 2 units on the horizontal axis to represent 1 hour and 2 units on the vertical axis to represent 20 miles.

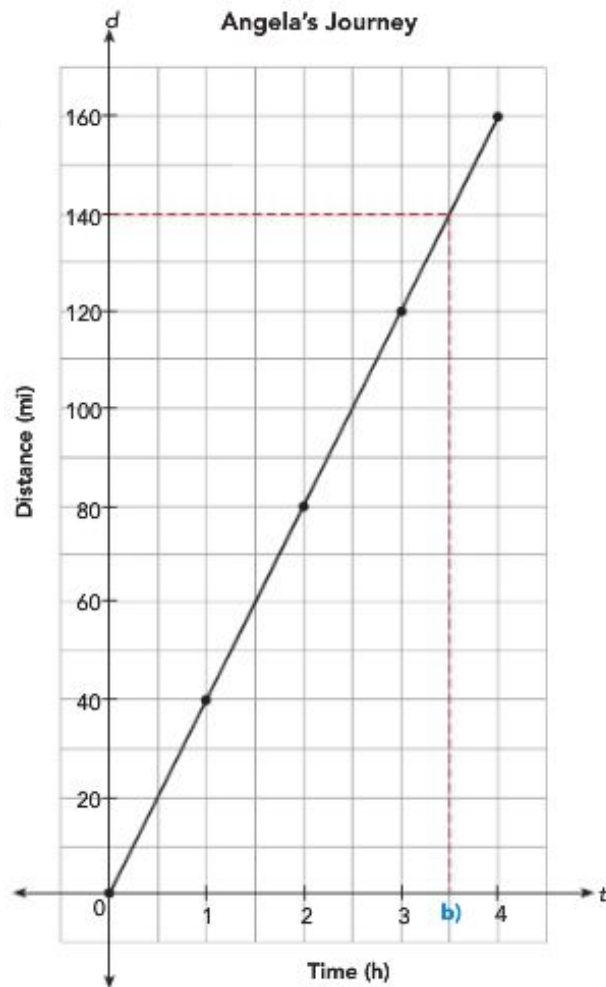
Time (t hours)	0	1	2	3	4
Distance Traveled (d miles)	0	40	80	120	160

What type of graph is it?

It is a straight line graph.
This is also called a
linear graph.

Name the dependent and independent variables.

d is the dependent variable, and t is the independent variable.

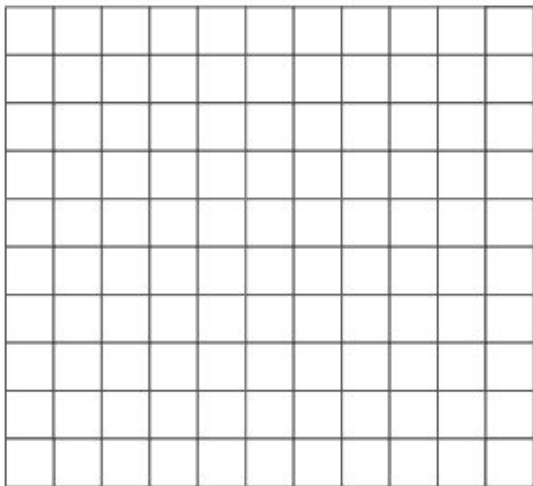


Practice:

The amount \$ y , that a postal company, Post Express, charges for sending a parcel is given by the equation $y = 2x + 10$, where x is the weight of the parcel in pounds. Use this information to answer questions 23 to 27.

Weight of Parcel (xlb)	0	2	4	6	8	10
Postage Charge (\$y)	10	a	18	22	b	30

23. Find the values of a and b .
24. Graph the relationship between x and y . Use 1 unit on the horizontal axis to represent 2 pounds and 1 unit on the vertical axis to represent \$4.



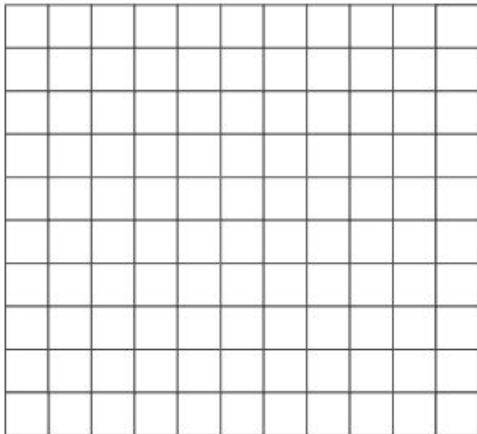
Practice: (Answer Key)

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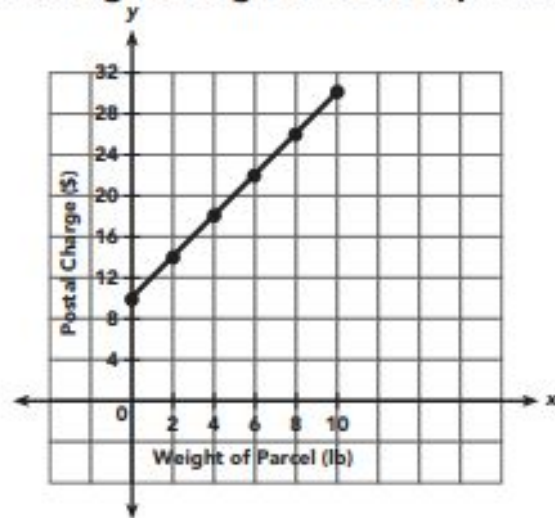
23. Find the values of a and b .

24. Graph the relationship between x and y . Use 1 unit on the horizontal axis to represent 2 pounds and 1 unit on the vertical axis to represent \$4.



$$\begin{aligned} 23. \quad a &= 2x + 10 \\ &= 2(2) + 10 \\ &= 4 + 10 \\ &= 14 \\ b &= 2x + 10 \\ &= 2(8) + 10 \\ &= 16 + 10 \\ &= 26 \end{aligned}$$

24. Postage Charge of Post Express

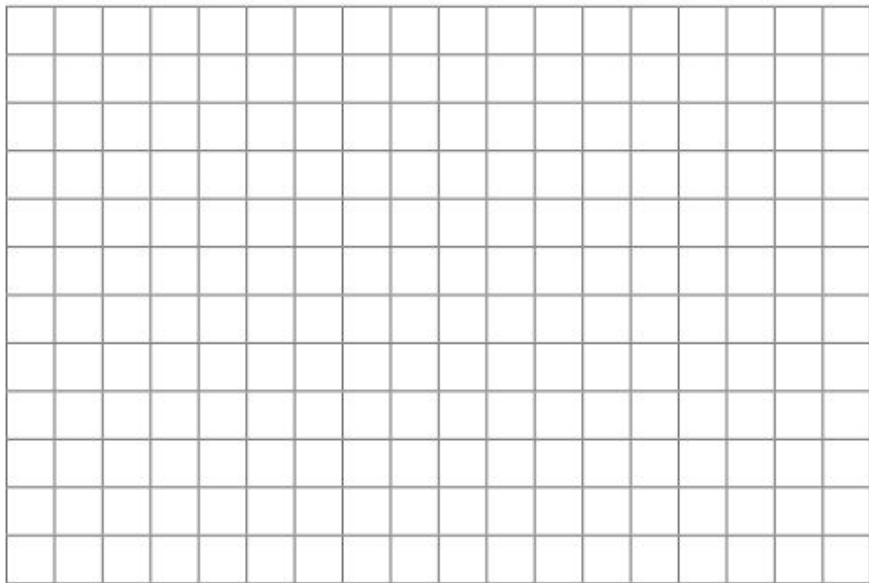


Additional Practice: Solve.

Water is being drained from a fish tank. The water level y centimeters, at time x minutes, is given by $y = 60 - 5x$. Complete the table. Graph the relationship between x and y . Use 1 unit on the horizontal axis to represent 1 minute and 2 units on the vertical axis to represent 10 centimeters.

a)

Time (x minutes)	2	4	6	8	10
Water Level (y centimeters)	50			20	



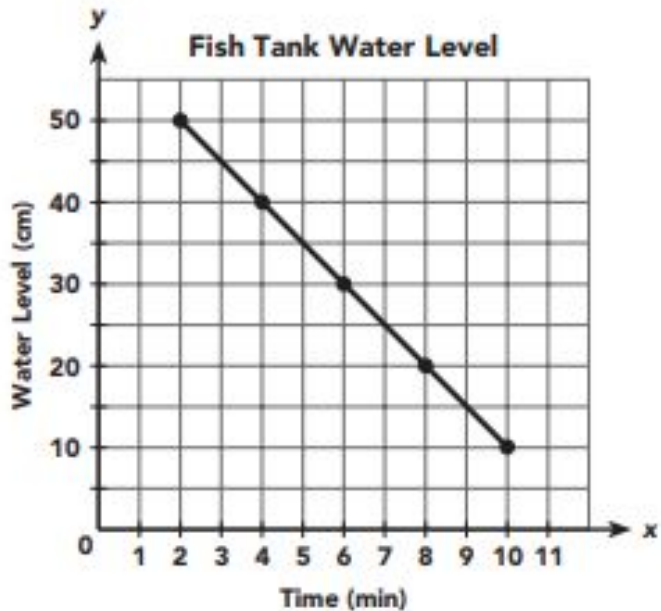
b) What is the water level at 3 minutes?

c) In how many minutes will the water level be 25 centimeters?

d) How long will it take to drain all the water from the tank?

Additional Practice: *(Answer Key)*

a) 40; 30; 10



b) What is the water level at 3 minutes?

b) 45 centimeters

c) In how many minutes will the water level be 25 centimeters?

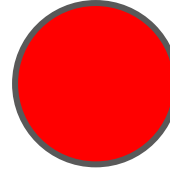
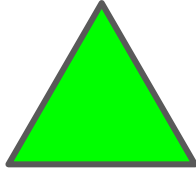
c) 7 minutes

d) How long will it take to drain all the water from the tank?

d) 12 minutes

Reflection:

Complete the triangle-square-circle reflection for today's lesson.



**What were the
three main
points of today's
lesson?**

**What squared
(made sense)
with you from
today's lesson?**

**What questions
do you still have
circling around
in your head?**

Additional Resources:

Click on the links below to get additional practice and to check your understanding!

[Khan Academy: Identifying Independent/Dependent Variable](#)

[Khan Academy: Two Variable Equation Tables](#)

[Khan Academy: Matching a Table to a Graph](#)

[Khan Academy: Relationship Between Variables](#)