Name _____   Date _____

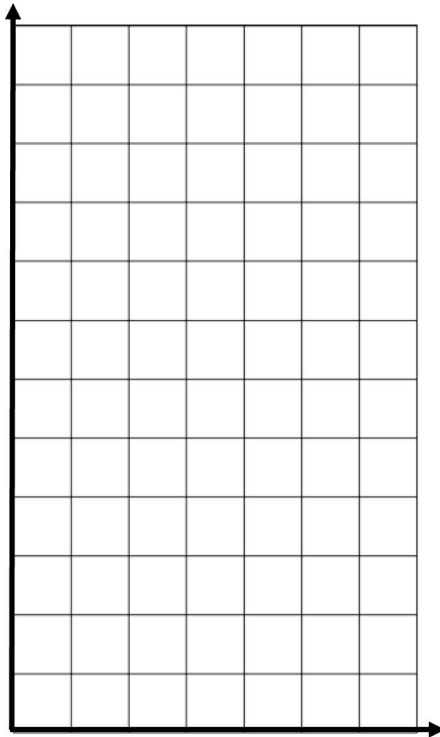# Multi-Step Problems in the Real World

Determine which variable is the independent variable and which variable is the dependent variable. Write an equation, make a table, and plot the points from the table on the graph.

Enoch can type 40 words per minute. Let w be the number of words typed and m be the number of minutes spent typing.

Independent variable _____

Dependent variable _____

Equation _____

1. Caleb started saving money in a cookie jar. He started with $25. He adds $10 to the cookie jar each week. Write an equation where w is the number of weeks Caleb saves his money and t is the total amount in dollars in the cookie jar. Determine which variable is the independent variable and which is the dependent variable. Then, graph the total amount in the cookie jar for w being less than 6 weeks.

2. Kevin is taking a taxi from the airport to his home. There is a $6 flat fee for riding in the taxi. In addition, Kevin must also pay $1 per mile. Write an equation where m is the number of miles and t is the total cost in dollars of the taxi ride. Determine which variable is independent and which is dependent. Then, graph the total cost for m being less than 6 miles.

3. Anna started with $10. She saved an additional $5 each week. Write an equation that can be used to determine the total amount saved in dollars saved, t, after a given number of weeks, w. Determine which variable is independent and which is dependent. Then, graph the total amount saved for the first 8 weeks.

4. Aliyah is purchasing produce at the farmers' market. She plans to buy $10 worth of potatoes and some apples. The apples cost $1.50 per pound. Write an equation to show the total cost of the produce, where T is the total cost in dollars, and a is the number of pounds of apples. Determine which variable is dependent and independent. Then, graph the equation.
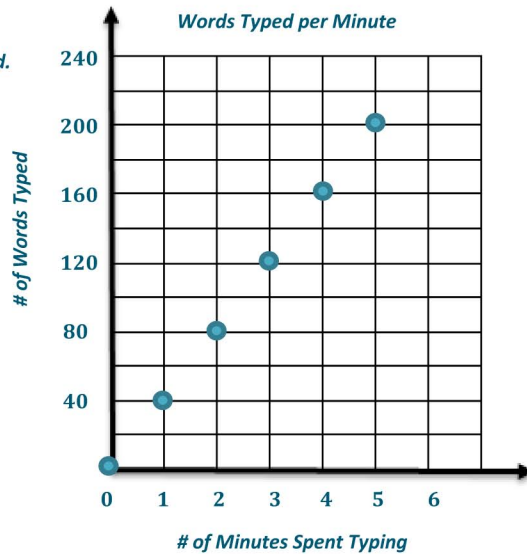
Determine which variable is the independent variable and which variable is the dependent variable. Write an equation, make a table, and plot the points from the table on the graph.

Enoch can type 40 words per minutes. Let w be the number of words typed and m be the number of minutes spent typing.

The independent variable is the number of minutes spent typing. The dependent variable is the number of words typed.

The equation is $w = 40m$.

# of Minutes	# of Words
0	0
1	40
2	80
3	120
4	160
5	200

Words Typed per Minute

# of Words Typed

240
200
160
120
80
40

0   1   2   3   4   5   6
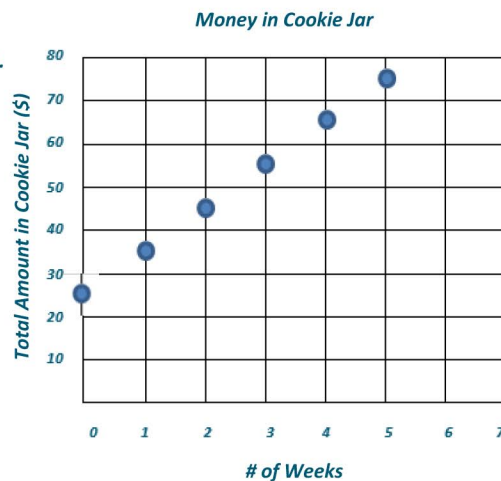
# of Minutes Spent Typing

1. Caleb started saving money in a cookie jar. He started with $\$25$. He adds $\$10$ to the cookie jar each week. Write an equation where w is the number of weeks Caleb saves his money and t is the total amount in dollars in the cookie jar. Determine which variable is the independent variable and which is the dependent variable. Then, graph the total amount in the cookie jar for w being less than 6 weeks.

$t = 10w + 25$

The total amount, t, is the dependent variable.

The number of weeks, w, is the independent variable.

# of Weeks	Total Amount in Cookie Jar ($)
0	25
1	35
2	45
3	55
4	65
5	75

Money in Cookie Jar

Total Amount in Cookie Jar ($)

80
70
60
50
40
30
20
10

0   1   2   3   4   5   6   7

# of Weeks

2. Kevin is taking a taxi from the airport to his home. There is a $6 flat fee for riding in the taxi. In addition, Kevin must also pay $1 per mile. Write an equation where m is the number of miles and t is the total cost in dollars of the taxi ride. Determine which variable is independent and which is dependent. Then, graph the total cost for m being less than 6 miles.

$t = 1m + 6$

The total cost, t, is the dependent variable.

The number of miles, m, is the independent variable.

| # of Miles	Total Cost ($)
0	6
1	7
2	8
3	9
4	10
5	11
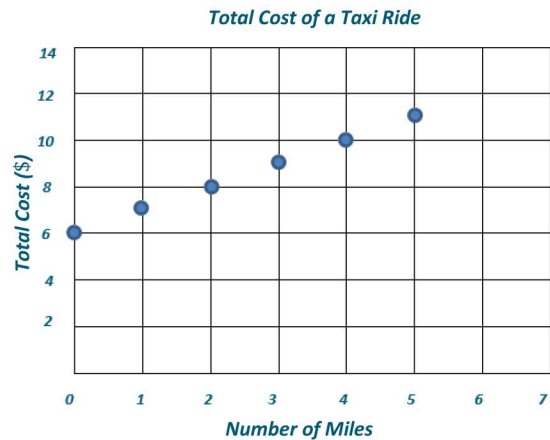
Total Cost of a Taxi Ride

3. Anna started with $10. She saved an additional $5 each week. Write an equation that can be used to determine the total amount saved in dollars, t, after a given number of weeks, w. Determine which variable is independent and which is dependent. Then, graph the total amount saved for the first 8 weeks.

$t = 5w + 10$

The total amount saved, t, is the dependent variable.

The number of weeks, w, is the independent variable.

# of Weeks	Total Amount ($)
0	10
1	15
2	20
3	25
4	30
5	35
6	40
7	45
8	50
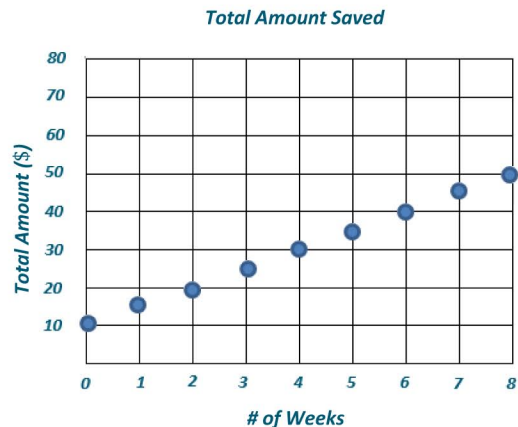
Total Amount Saved

4. Aliyah is purchasing produce at the farmers' market. She plans to buy $10 worth of potatoes and some apples. The apples cost $1.50 per pound. Write an equation to show the total cost of the produce, where T is the total cost, in dollars, and a is the number of pounds of apples. Determine which variable is dependent and independent. Then, graph the equation on the coordinate plane.

$T = 1.50a + 10$

The total cost is the dependent variable. The number of pounds of apples is the independent variable.

# of Pounds of Apples	Total Cost ($)
0	10
1	11.50
2	13
3	14.50
4	16
5	17.50

Total Cost at the Farmers' Market