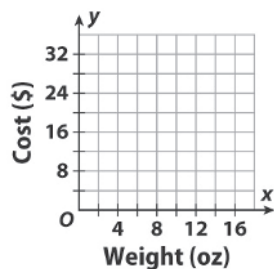# Writing Linear Equations from a Table

Graph the data, and find the slope and *y*-intercept from the graph.
Then write an equation for the graph in slope-intercept form.
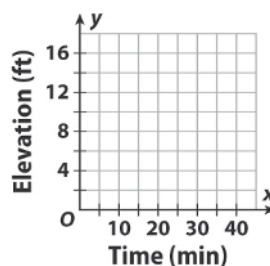
1.

Weight (oz), *x*	2	4	8	10
Cost ($), *y*	12	16	24	28

2.

Time (min), *x*	5	20	30	35
Elevation (ft), *y*	4	10	14	16

slope: _____

y-intercept: _____

equation: _____

slope: _____

y-intercept: _____

equation: _____

Write an equation in slope-intercept form that represents the data.

3.

Sales Per Day, *x*	0	1	2	3
Daily Pay ($), *y*	100	105	110	115

equation: _____

4.

Time Since Turning Oven Off (min), *x*	0	5	10	15
Temperature of Oven (°F), *y*	375	325	275	225

equation: _____

The table shows the linear relationship of the height *y* (in inches)
of a tomato plant *x* weeks after it was planted.

5. Write an equation that shows the height of the
tomato plant.

_____

6. Use the equation to find the height of the tomato plant
6 weeks after it was planted.

_____

Weeks After Planting, *x*	Height (in.), *y*
0	8
1	11
2	14
3	17

Write an equation to express y in terms of x. The first one is done for you.

1.

x	0	1	2	3
y	2	3	4	5

$y = x + 2$

2.

x	5	10	15	20
y	1	2	3	4

_____

3.

x	3	4	5	6
y	9	12	15	18

_____

4.

x	7	8	9	10
y	5	6	7	8

_____

5. When George works 8 hours he earns $80. When George works 10 hours he earns $100. When George works 12 hours he earns $120. Complete the table. Circle the letter of the equation that relates the dollars George earns, y, to the number of hours he works, x.

Number of hours, x	8	10	12
Dollars earned, y	80		

A $y = x \div 10$ C $y = 10x$

B $y = x + 72$

6. When Javier is 2, Arianna is 5. When Javier is 3, Arianna is 6. When Javier is 8, Arianna will be 11. When Javier is 20, Arianna is 23. Complete the table. Circle the letter of the equation that relates the age of Arianna, y, to the age of Javier, x.

Javier's age, x	2	3	8	20
Arianna's age, y	5			

A $y = x \div 2$ C $y = 2x$

B $y = x + 3$

When Javier is 30 years old, Arianna will be _____.

Write an equation to express y in terms of x. Use your equation to complete the table.

1.

x	1	2	3	4	5
y	7	14	21	28	

_____

2.

x	2	3	4	5	6
y	−3	−2	−1	0	

_____

3.

x	20	16	12	8	4
y	10	8	6	4	

_____

4.

x	7	8	9	10	11
y	11	12	13	14	

_____

5. Henry records how many days he rides his bike and how far he rides each week. He rides the same distance each time. He rode 18 miles in 3 days, 24 miles in 4 days, and 42 miles in 7 days. Write and solve an equation to find how far he rides his bike in 10 days.

Number of days, d	3	4	7	10
Number of miles, m	18			

Equation relating d and m is _____.

The number of miles Henry rides his bike in 10 days is _____.

6. When Cabrini is 6, Nikos is 2. When Cabrini is 10, Nikos will be 6. When Cabrini is 16, Nikos will be 12.When Cabrini is 21, Nikos will be 17. Write and solve an equation to find Nikos' age when Cabrini is 40.

Cabrini's age, x	6	10	16	21	40
Nikos' age, y	2				

Equation relating x and y is _____.

When Cabrini is 40 years old, Nikos will be _____.