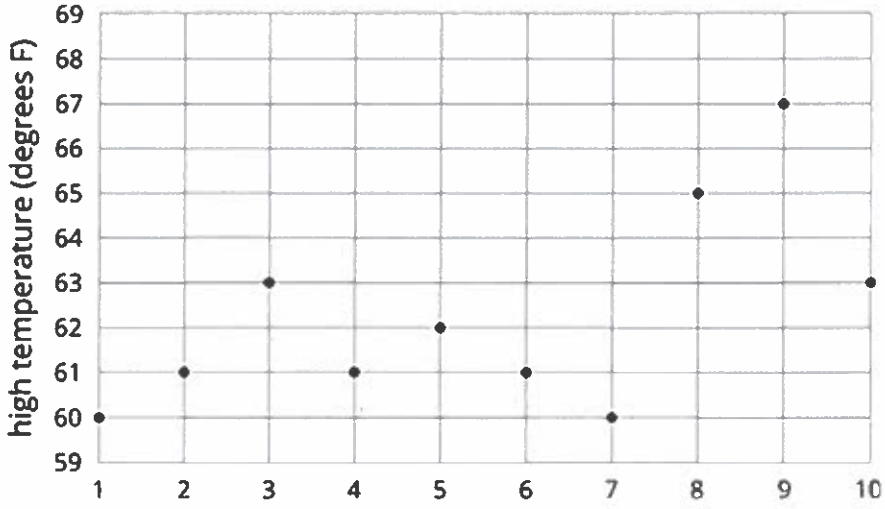
Equations for Functions Practice

Name:_____

1. The graph and the table show the high temperatures in a city over a 10-day period.



   a. What day or days had the highest temperature?

   9

   b. What day or days had the lowest temperature?

   1 & 7

   c. When did the temperature reach 63 degrees for the second time?

   10

   d. Is the high temperature a function of the day or is the day a function of the high temperature?

   Temp depends on day

2. The amount Amber's sister earns at her part-time job is proportional to the number of hours she works. She earns $12.40 per hour.

   a. Write an equation in the form y = mx to describe this situation, where x represents the hours she works and y represents the dollars she earns.

   $y = 12.40x$

   b. Is y a function of x? Explain how you know.

   Yes → $ depends on time

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3. Use the equation 3x + 6y = 18 to complete the table, then graph the line using y as the dependent variable.

X	0	2	6	-14
y	3	2	0	10

$3(0)+6y=18$

$\frac{6y}{6}=\frac{18}{6}$

$y=3$

$3x+6(10)=18$

$3x+60=18$

$-60\ \ -60$

$3x=-42$

$\frac{3x}{3}=\frac{-42}{3}$

$x=-14$

$3x+6(2)=18$

$3x+12=18$

$-12\ \ -12$

$3x=6$

$\frac{3x}{3}=\frac{6}{3}$

$x=2$

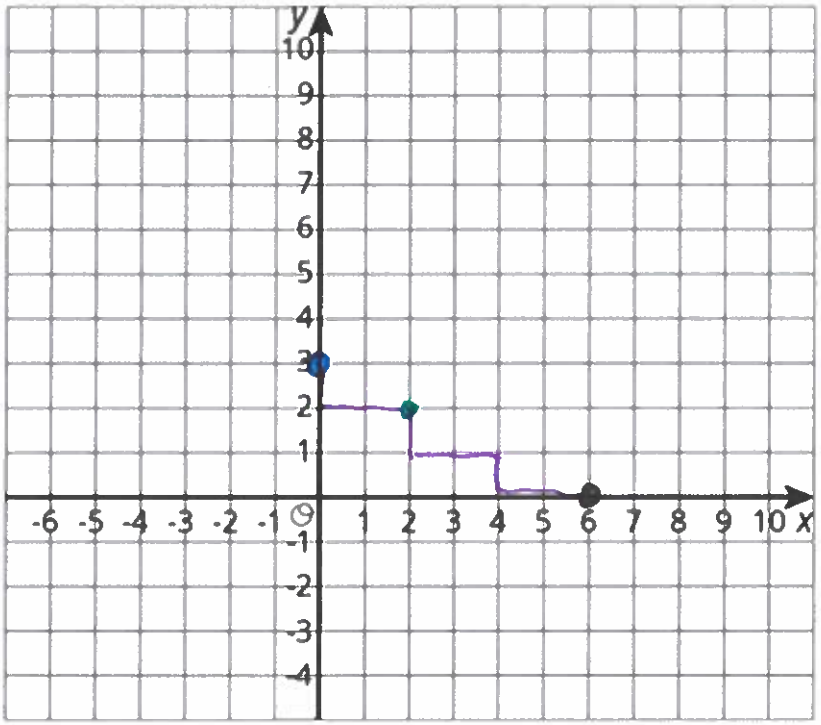
$3(6)+6y=18$

$18+6y=18$

$-18\ \ -18$

$6y=0$

$y=0$



4. In science class, John is using a graduated cylinder with water in it to measure the volume of some marbles. After dropping in 2 marbles so they are all under water, the volume of water in the cylinder is at 12 milliliters. After dropping in 6 marbles so that they are all under water, the volume in the cylinder is at 20 milliliters.

a. What is the change in volume when one marble is added?

$4\begin{pmatrix}2 \rightarrow 12\text{ mL}\\ 6 \rightarrow 20\text{mL}\end{pmatrix}8\text{mL}$

$\frac{8\text{mL}}{4}=2\text{mL per marble}$

b. How much water was in the cylinder before any marbles were added?

$-1\begin{pmatrix}1\text{ marble}=10\text{ mL}\\ 2\text{ marbles}=12\text{ mL}\end{pmatrix}-2$

8 mL

c. What would be the volume of water after 10 marbles are added?

$10\cdot 2=20$

$+8$

28 mL