

Real-World Problems

Learning Target 1

(_____ /11 points _____ %)

I am able to represent real-world problems using: variables, symbols, expressions, and one- and two-step equations.

Write an equation for the following tables and graphs.

- 1.) To encourage customers, a new movie theater is offering memberships. The membership costs \$75 a year plus \$2 per movie. For non-members, the cost of a movie is \$5.75.
 - a.) Write an equation for the cost for members and write an equation for non-members. Explain what the variables in your equations represent. (2 pts.)
 - b.) What is the slope of each equation? What does it mean in the context of this problem? (2 pts.)
 - c.) What is the y-intercept of each equation? What does it mean in the context of this problem? (2 pts.)
 - d.) Find the cost for both members and non-members for seeing 10 movies. (2 pts.)
 - e.) How many movies can each see for \$100? (2 pts.)
 - f.) How many movies would make both plans equal to each other? (1 pt.)

Tables, Graphs, Equations

Learning Target 2

I am able to translate linear tables, graphs, and equations.

(____ /24 points ____ %)

Write an equation for the following tables and graphs.

1.)

x	2	4	6	8
y	5	8	11	14

2.)

x	-1	1	3	5
y	6	0	-6	-12

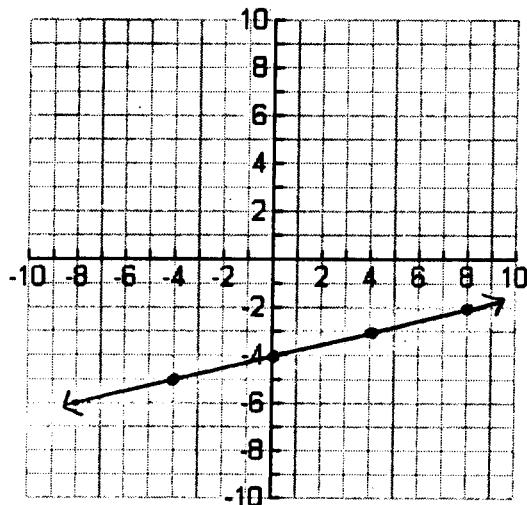
3.)

x	5	6	7	8
y	5	13	21	29

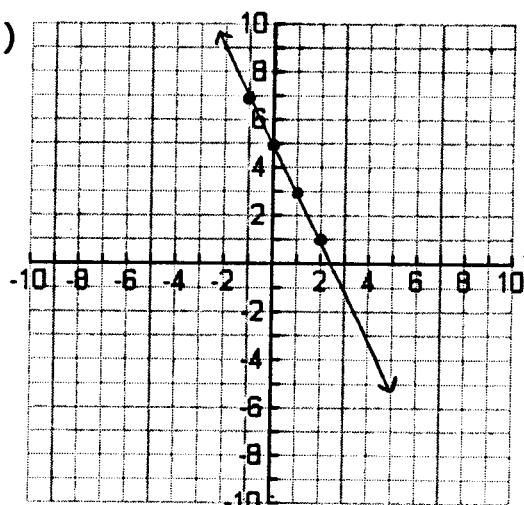
4.)

x	-2	0	2	4
y	-5	-7	-9	-11

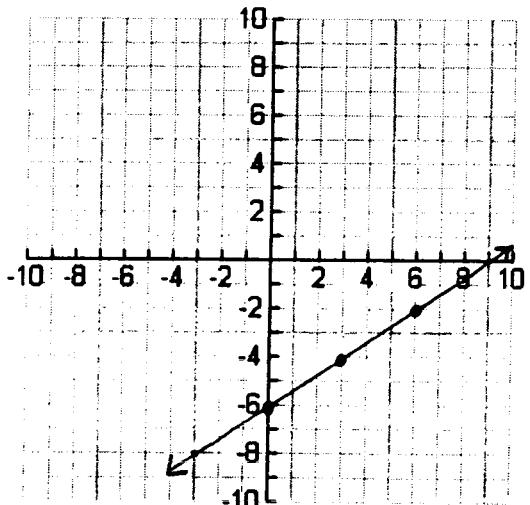
5.)



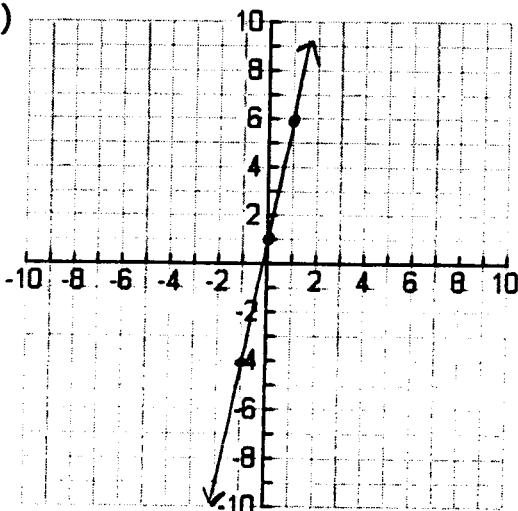
6.)



6.)



8.)



9.) Identify the slope & y-intercept in each equation.

a.) $y = 17 - 9x$

b.) $y = 20 - x$

c.) $y = 5.4x$

d.) $y = 9$

e.) $8x + y = 19$

f.) $-2x + y = -20$

10.) Write an equation for the set of coordinates.

a.) $(-2, 7) (-1, 3) (0, -1) (1, -5)$

b.) $(-4, 4) (-2, 0) (1, -6) (2, -8)$

11.) Write an equation for the following conditions.

a.) The slope is 4 and the y-intercept is -12.

b.) The slope is 0 and the y-intercept is $2\frac{1}{2}$.

c.) The slope is -2 and passes through the point $(3, -8)$.

d.) The slope is 4 and passes through the point $(15, -9)$.

e.) The line passes through the points $(5, 32)$ and $(15, 62)$.

f.) The line passes through the points $(-5, 44)$ and $(5, 24)$.

12.) Consider the following equation: $y = 4x + 5$

a.) Write an equation that is parallel.

b.) Write an equation that is perpendicular.

Solving Equations

Learning Target 3

(_____ / 20 points _____ %)

I am able to find the solution to one- and two-step linear equations.

Solve each equation for the given variable.

$$\begin{aligned}1.) \quad & 4x + 3 = 7 \\2.) \quad & 3n - 8 = 10 \\3.) \quad & 0 = 7m - 21 \\4.) \quad & 4k + 32 = 4 \\5.) \quad & 47 = 15 + 4c\end{aligned}$$

$$\begin{aligned}6.) \quad & \frac{1}{7}x + 10 = 3 \\7.) \quad & \frac{2}{3}d - 2 = 40 \\8.) \quad & 1 = \frac{2}{5}a + 9 \\9.) \quad & -\frac{3}{4}x + 3 = -15 \\10.) \quad & 14 = -\frac{1}{3}f - 2\end{aligned}$$

$$\begin{aligned}11.) \quad & \frac{a}{-4} + 14 = 20 \\12.) \quad & \frac{c}{7} + 20 = 7 \\13.) \quad & 40 = \frac{k}{11} + 32 \\14.) \quad & 15 = \frac{x}{-2} - 18 \\15.) \quad & -7 + \frac{p}{5} = -21\end{aligned}$$

$$\begin{aligned}16.) \quad & 5x = 27 - 4x \\17.) \quad & 7w - 20 = 2w + 5 \\18.) \quad & 11a + 40 = -4a + 70 \\19.) \quad & 6d + 11 = -3d + 47 \\20.) \quad & 2c - 13 = -2c + 15\end{aligned}$$