

3-1 Practice

Graphing Linear Equations

Determine whether each equation is a linear equation. Write *yes* or *no*. If yes, write the equation in standard form and determine the *x*- and *y*-intercepts.

1. $4xy + 2y = 9$

2. $8x - 3y = 6 - 4x$

3. $7x + y + 3 = y$

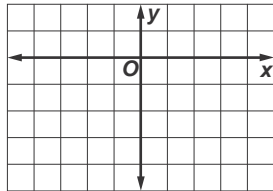
4. $5 - 2y = 3x$

5. $\frac{x}{4} - \frac{y}{3} = 1$

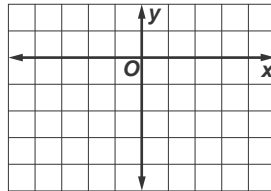
6. $\frac{5}{x} - \frac{2}{y} = 7$

Graph each equation.

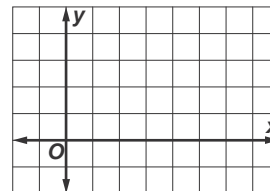
7. $\frac{1}{2}x - y = 2$



8. $5x - 2y = 7$

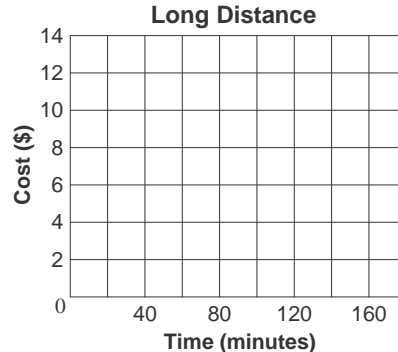


9. $1.5x + 3y = 9$



10. COMMUNICATIONS A telephone company charges \$4.95 per month for long distance calls plus \$0.05 per minute. The monthly cost c of long distance calls can be described by the equation $c = 0.05m + 4.95$, where m is the number of minutes.

- Find the *y*-intercept of the graph of the equation.
- Graph the equation.
- If you talk 140 minutes, what is the monthly cost?



11. MARINE BIOLOGY Killer whales usually swim at a rate of 3.2–9.7 kilometers per hour, though they can travel up to 48.4 kilometers per hour. Suppose a migrating killer whale is swimming at an average rate of 4.5 kilometers per hour. The distance d the whale has traveled in t hours can be predicted by the equation $d = 4.5t$.

- Graph the equation.
- Use the graph to predict the time it takes the killer whale to travel 30 kilometers.

