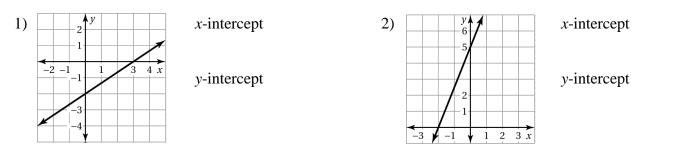
## 4.5 Graphing Linear Equations in Standard Form

Use the graph to determine the *x*- and *y*-intercepts.

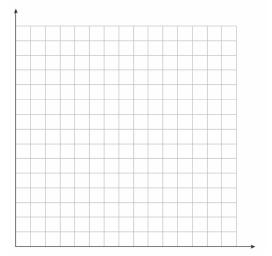


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Graph the linear equations using intercepts. Make sure you label the number of the problem next to the graph of the linear equation.

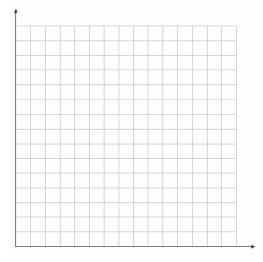
| 3) | 4x + y = 8   | [           |   |    |    |   |    |    |     | <b>x</b>  |   |   |   |   |           |
|----|--------------|-------------|---|----|----|---|----|----|-----|-----------|---|---|---|---|-----------|
|    | x-intercept  | y-intercept |   |    |    |   |    |    | - 8 |           |   |   |   |   |           |
|    |              | -           |   |    |    |   |    |    | -6  |           |   |   |   |   |           |
|    |              | -           | - | _  |    | - | -  |    | -4  | $\vdash$  | _ |   |   |   |           |
|    |              | -           |   |    |    |   |    |    | -2  |           |   |   |   |   |           |
| 4) | 3x - 2y = 12 | -           | • | -8 | -6 |   | -4 | -2 | 0   |           | 2 | 4 | 6 | 8 | x         |
| ., |              |             |   | 0  |    |   | -  |    | 2   |           |   |   |   | 0 |           |
|    | x-intercept  | y-intercept | + | _  |    | + | -  |    |     | $\square$ | _ |   |   |   |           |
|    |              | -           |   |    |    | - | -  |    | 4   |           |   |   |   |   | $\square$ |
|    |              | -           |   |    |    |   |    |    | 6   |           |   |   |   |   |           |
|    |              | -           | + | _  |    | + | -  |    | 8   | $\vdash$  |   |   |   |   |           |
|    |              | [           |   |    |    |   |    |    |     | ł         |   |   |   |   |           |
| -  |              | r           |   |    |    |   |    |    |     | A 1/      |   |   |   |   |           |
| 5) | 2x - 3y = 6  | -           | + | _  |    | + | +  |    | -8  | ▲ y       | - |   |   |   |           |
|    | x-intercept  | y-intercept |   |    |    |   |    |    | -8  |           |   |   |   |   |           |
|    |              | -           |   |    |    |   |    |    | -6  |           |   |   |   |   |           |
|    |              | -           | - |    |    | + | +  |    | +4  | $\vdash$  |   |   |   |   |           |
|    |              | -           | _ |    |    | _ |    |    | -2  |           |   |   |   |   |           |
|    |              | -           | • | -8 | -6 |   | -4 | -2 |     |           | 2 | 4 |   |   |           |
| 6) | 5x - 3y = 15 | -           |   | -8 | -6 |   | -4 | -2 | 0   |           | 2 | 4 | 6 | 8 | x         |
|    | x-intercept  | y-intercept | + | _  |    | + | -  |    |     | $\square$ | _ |   |   |   | $\square$ |
|    |              | ,           |   |    |    |   |    |    | 4   |           |   |   |   |   |           |
|    |              | -           |   |    |    |   |    |    | 6   |           |   |   |   |   |           |
|    |              | -           |   |    |    |   |    |    | 8   |           |   |   |   |   |           |
|    |              |             |   |    |    |   |    |    |     | ł         |   |   |   |   |           |

- 7) You have two jobs. You earn \$8 for each hour *x* that you work as a restaurant host and \$6 for each hour *y* that you work as a hair washer. Your earnings for the pay period are \$144.
  - a) Write an equation in standard form that models your earnings.
  - b) Find the *x* and *y*-intercepts.



- c) Graph the equation.
- d) You worked 10 hours as a hair washer. How many hours did you work as a host?

- 8) Your family is on a ski vacation. Lift tickets for the family cost \$80 per day. Snowboard rentals cost \$40 per day. You purchase lift tickets for *x* days and snowboard rentals for *y* days and spend \$480.
  - a) Write an equation in standard form that models your earnings.
  - b) Find the *x* and *y*-intercepts.



- c) Graph the equation.
- d) You rent snowboards for 2 days. How many days did you purchase lift tickets?