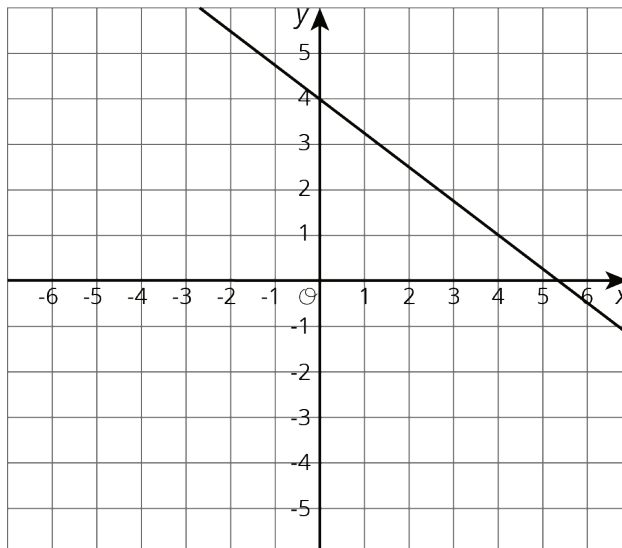


Lesson 12 Practice Problems

1. Here is the graph for one equation in a system of equations:

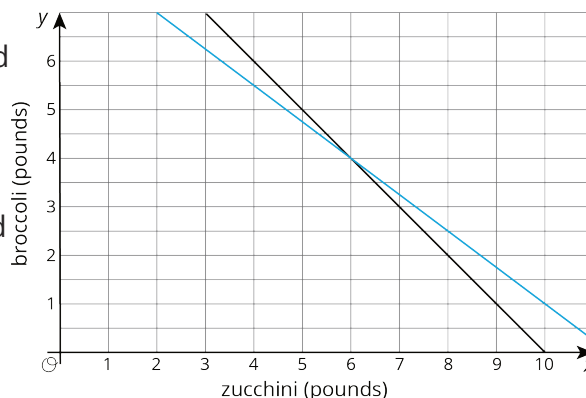


- Write a second equation for the system so it has infinitely many solutions.
- Write a second equation whose graph goes through $(0, 1)$ so the system has no solutions.
- Write a second equation whose graph goes through $(0, 2)$ so the system has one solution at $(4, 1)$.

2. Create a second equation so the system has no solutions.

$$\left\{ \begin{array}{l} y = \frac{3}{4}x - 4 \end{array} \right.$$

3. Andre is in charge of cooking broccoli and zucchini for a large group. He has to spend all \$17 he has and can carry 10 pounds of veggies. Zucchini costs \$1.50 per pound and broccoli costs \$2 per pound. One graph shows combinations of zucchini and broccoli that weigh 10 pounds and the other shows combinations of zucchini and broccoli that cost \$17.



- Name one combination of veggies that weighs 10 pounds but does not cost \$17.
- Name one combination of veggies that costs \$17 but does not weigh 10 pounds.
- How many pounds each of zucchini and broccoli can Andre get so that he spends all \$17 and gets 10 pounds of veggies?

(From Unit 4, Lesson 10.)

4. The temperature in degrees Fahrenheit, F , is related to the temperature in degrees Celsius, C , by the equation

$$F = \frac{9}{5}C + 32$$

- In the Sahara desert, temperatures often reach 50 degrees Celsius. How many degrees Fahrenheit is this?
- In parts of Alaska, the temperatures can reach -60 degrees Fahrenheit. How many degrees Celsius is this?
- There is one temperature where the degrees Fahrenheit and degrees Celsius are the same, so that $C = F$. Use the expression from the equation, where F is expressed in terms of C , to solve for this temperature.

(From Unit 4, Lesson 9.)