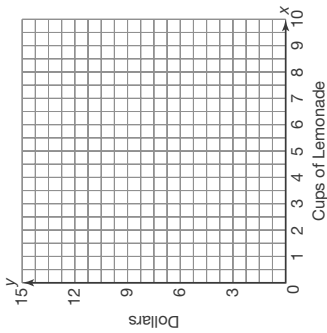


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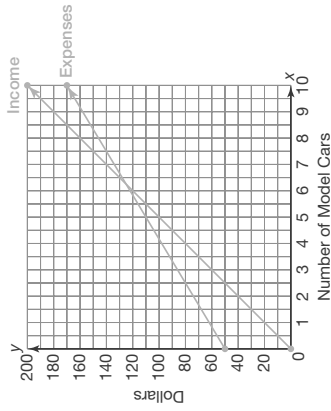
- Ramona sets up a lemonade stand in front of her house. Each cup of lemonade costs Ramona \$0.30 to make, and she spends \$6 on the advertising signs she puts up around her neighborhood. She sells each cup of lemonade for \$1.50.



**Problem Set**

Write a system of linear equations to represent each problem situation. Define each variable. Then, graph the system of equations and estimate the break-even point. Explain what the break-even point represents with respect to the given problem situation.

- Eric sells model cars from a booth at a local flea market. He purchases each model car from a distributor for \$12, and the flea market charges him a booth fee of \$50. Eric sells each model car for \$20. Eric's income can be modeled by the equation  $y = 20x$ , where  $y$  represents the income (in dollars) and  $x$  represents the number of model cars he sells. Eric's expenses can be modeled by the equation  $y = 12x + 50$ , where  $y$  represents the expenses (in dollars) and  $x$  represents the number of model cars he purchases from the distributor.



The break-even point is between 6 and 7 model cars. Eric must sell more than 6 model cars to make a profit.

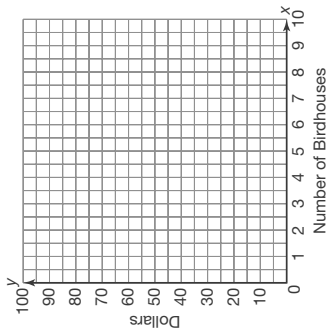


**LESSON 6.1 Skills Practice**

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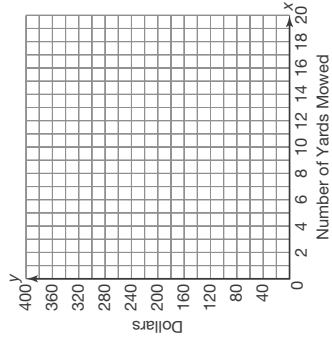
4. Olivia is building birdhouses to raise money for a trip to Hawaii. She spends a total of \$30 on the tools needed to build the houses. The material to build each birdhouse costs \$3.25. Olivia sells each birdhouse for \$10.



**LESSON 6.1 Skills Practice**

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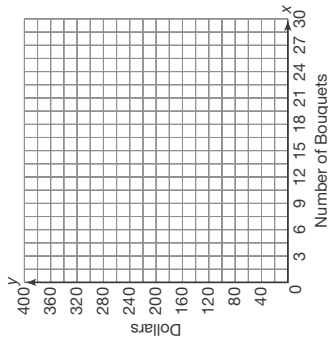
3. Chen starts his own lawn mowing business. He initially spends \$180 on a new lawnmower. For each yard he mows, he receives \$20 and spends \$4 on gas.



**LESSON 6.1 Skills Practice**

Name \_\_\_\_\_ Date \_\_\_\_\_

6. Jerome sells flowers for \$12 per bouquet through his Internet flower site. Each bouquet costs him \$5.70 to make. Jerome also paid a one-time fee of \$150 for an Internet marketing firm to advertise his company.



**LESSON 6.1 Skills Practice**

5. The Spanish Club is selling boxes of fruit as a fundraiser. The fruit company charges the Spanish Club \$7.50 for each box of fruit and a shipping and handling fee of \$100 for the entire order. The Spanish Club sells each box of fruit for \$15.

