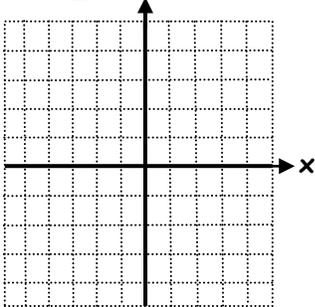


Linear Systems Review

1. Solve each system graphically.

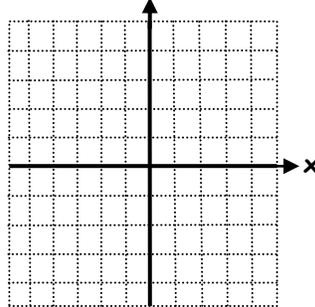
a) $y = -x + 2$

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



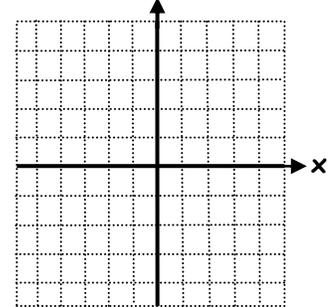
b) $x - y = -1$

$$2x - y = 1$$



c) $y = 3x - 4$

$$2x + y = 1$$



2. Tools-R-Us rents snowblowers for a base fee of \$20 plus \$8/h. Randy's Rentals rents snowblowers for a base fee of \$12 plus \$10/h.

a) Create equations that represent the cost of renting a snowblower from each company.

b) Solve the system of equations.

c) What does the point of intersection mean in this situation?

3. Courtney paid a one-time registration fee to join a fitness club. She also pays a monthly fee. After three months, she had paid \$315. After seven months, she had paid \$535. Determine the registration fee and the monthly fee.

4. Solve each system algebraically.

a) $x = 3y - 1$

$$4x - 3y = 5$$

b) $2x - 5y = -4$

$$-2x + y = 4$$

c) $y = 3x - 4$

$$y = -12x + 11$$

$$\begin{aligned} \text{d) } 5x + 2y &= 18 \\ 2x + 3y &= 16 \end{aligned}$$

$$\begin{aligned} \text{e) } 2x - 3y &= 11 \\ -2x - 1 &= y \end{aligned}$$

$$\begin{aligned} \text{f) } 3x - 4y &= 5 \\ x - y &= 5 \end{aligned}$$

5. In his spare time, Kim likes to go cycling. He cycles partly on paved surfaces and partly off-road, through hilly and wooded areas. He cycles at 25 km/h on paved surfaces and at 10 km/h off-road. One day, he cycled 41 km in 2 h. How far did he cycle off-road?

6. Shannon needs 20 g of 80% gold to make a pendant. She has some 85% gold and some 70% gold, from broken jewelry, and wants to know how much of each she should use. Determine the quantity of each alloy that she should use.