

Review Exercise Set 10

Exercise 1: Solve.

$$3x + 8 > 4x$$

Exercise 2: Solve.

$$13 - 5x \leq 3x$$

Exercise 3: Solve and graph.

$$2(6y - 3) > 3(5y + 4)$$

Exercise 4: Solve.

$$0.2(35 - x) \geq 3.3x$$

Exercise 5: Solve. A salesperson is paid the higher of either a base salary of \$2000 per month or \$1000 plus 7% commission on his monthly sales. How much does he have to sell a month in order to make more than the base salary.

Review Exercise Set 10 Answer Key

Exercise 1: Solve.

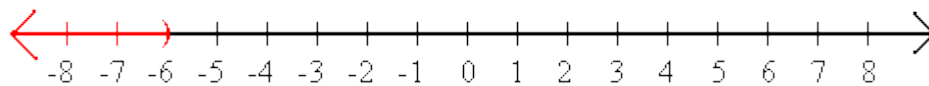
$$\begin{aligned}3x + 8 &> 4x \\3x - 3x + 8 &> 4x - 3x \\8 &> x \\x &< 8\end{aligned}$$

Exercise 2: Solve.

$$\begin{aligned}13 - 5x &\leq 3x \\13 - 5x + 5x &\leq 3x + 5x \\13 &\leq 8x \\13 \div 8 &\leq 8x \div 8 \\1\frac{5}{8} &\leq x \\x &\geq 1\frac{5}{8}\end{aligned}$$

Exercise 3: Solve and graph.

$$\begin{aligned}2(6y - 3) &> 3(5y + 4) \\12y - 6 &> 15y + 12 \\12y - 12y - 6 &> 15y - 12y + 12 \\-6 &> 3y + 12 \\-6 - 12 &> 3y + 12 - 12 \\-18 &> 3y \\-18 \div 3 &> 3y \div 3 \\-6 &> y \\y &< -6\end{aligned}$$



Exercise 4: Solve.

$$\begin{aligned}0.2(35 - x) &\geq 3.3x \\7 - 0.2x &\geq 3.3x \\7 - 0.2x + 0.2x &\geq 3.3x + 0.2x \\7 &\geq 3.5x \\7 \div 3.5 &\geq 3.5x \div 3.5 \\2 &\geq x \\x &\leq 2\end{aligned}$$

Exercise 5: Solve. A salesperson is paid the higher of either a base salary of \$2000 per month or \$1000 plus 7% commission on his monthly sales. How much does he have to sell a month in order to make more than the base salary?

Let x = monthly sales

$$\begin{aligned}1000 + 7\% \times (x) &> 2000 \\1000 + 0.07x &> 2000 \\1000 - 1000 + 0.07x &> 2000 - 1000 \\0.07x &> 1000 \\0.07x \div 0.07 &> 1000 \div 0.07 \\x &> 14,285.71\end{aligned}$$

The salesperson would have to have monthly sales of more than \$14,285.71 in order to exceed the base salary.