

2.19

Solving a Linear Inequality: Problem Type 4

• Example 1

Solve the inequality.

$$3x - 9 \leq \frac{2}{3}x - 7$$

Our goal is to isolate x .

$$3x - \frac{2}{3}x - 9 \leq -7$$

$$3x - \frac{2}{3}x \leq 2$$

$$\frac{7}{3}x \leq 2$$

$$x \leq \frac{6}{7}$$

● ● ● CHECK YOURSELF 1

Solve the inequality.

$$\frac{1}{3}x - 7 \geq \frac{4}{3}x - 9$$

● ● ● CHECK YOURSELF ANSWER

1. $x \leq 2$.

2.19 Exercises

Name _____

Section _____

Date _____

A N S W E R S

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

Solve the inequalities.

1. $\frac{4}{5}x - 2 \leq -\frac{1}{5}x + 3$

2. $3x - 4 \leq 10x - 15$

3. $\frac{1}{2}x - \frac{1}{2} \leq \frac{3}{2}x + \frac{7}{2}$

4. $\frac{8}{3}x - 3 \geq 2x - 9$

5. $x - 7 \leq 2x + 4$

6. $\frac{6}{11}x + 4 < \frac{x}{11} + \frac{4}{11}$

7. $2x + \frac{3}{5} > \frac{5}{3}x + \frac{4}{5}$

8. $\frac{7}{3}x - 2 > 9 + \frac{x}{3}$

9. $\frac{5}{2}x - 1 < 4 - \frac{7}{3}x$

10. $\frac{8}{3}x + 4 < -4 - \frac{4}{3}x$