

Name: _____ Period: _____ Date: _____

Solving Inequalities Using Multiplication or Division Assignment

Solve each inequality.

1. $18x < 60$

2. $10a > 55$

3. $-11y \geq 88$

4. $22 \geq -1.1x$

5. $\frac{a}{5} > 7$

6. $-\frac{y}{7} \leq -7$

7. $8 \leq -\frac{x}{5}$

8. $\frac{9a}{-14} > \frac{3}{7}$

9. $-\frac{3}{4}y \geq 42$

10. $-1.9x > 95$

11. $-3.4a \geq 13.6$

12. $6y \leq 138$

13. $-12.8x \geq 64$

14. $-2.6a < 7.8$

15. $6y > 48$

Name: _____ Period: _____ Date: _____

Solving Inequalities Using Multiplication or Division Assignment

Write and solve each inequality.

16. Seven times a number is greater than 28.

17. Negative six times a number is at least 14.

18. Twenty five percent of a number is greater than or equal to 90.

19. A half of a number is less than 24.

Write and solve each inequality.

20. Suppose we need at least 6 apples to make a plate of apple pie. If we have 36 apples, how many plate of apple pie can we make?

21. The price of a ceramic tile varies depending on its design. If cost of the ceramic tile cost at most \$2.95 each, how many ceramic tile can Greg buy with his \$100?

Solving Inequalities Using Multiplication or Division Assignment**ANSWER**

Solve each inequality.

1. $18x < 60$

$$\frac{18x}{18} < \frac{60}{18}$$

$$x < \frac{10}{3}$$

2. $10a > 55$

$$\frac{10a}{10} > \frac{55}{10}$$

$$a > 5.5$$

3. $-11y \geq 88$

$$\frac{-11y}{-11} \leq \frac{88}{-11}$$

$$y \leq -8$$

4. $22 \geq -1.1x$

$$\frac{22}{-1.1} \leq \frac{-1.1x}{-1.1}$$

$$-20 \leq x$$

5. $\frac{a}{5} > 7$

$$\frac{a}{5}(5) > 7(5)$$

$$a > 35$$

6. $-\frac{y}{7} \leq -7$

$$-\frac{y}{7}(-7) \geq -7(-7)$$

$$y \geq 49$$

7. $8 \leq -\frac{x}{5}$

$$8(-5) \geq -\frac{x}{5}(-5)$$

$$-40 \geq x$$

8. $\frac{9a}{-14} > \frac{3}{7}$

$$\frac{9a}{-14}\left(-\frac{14}{9}\right) > \frac{3}{7}\left(-\frac{14}{9}\right)$$

$$a < -\frac{2}{3}$$

9. $-\frac{3}{4}y \geq 42$

$$\left(-\frac{4}{3}\right)\left(-\frac{3}{4}y\right) \leq 42\left(-\frac{4}{3}\right)$$

$$y \leq -56$$

10. $-1.9x > 95$

$$\frac{-1.9x}{-1.9} < \frac{95}{-1.9}$$

$$x < -50$$

11. $-3.4a \geq 13.6$

$$\frac{-3.4a}{-3.4} \leq \frac{13.6}{-3.4}$$

$$a \leq -4$$

12. $6y \leq 138$

$$\frac{6y}{6} \leq \frac{138}{6}$$

$$y \leq 23$$

13. $-12.8x \geq 64$

$$\frac{-12.8x}{-12.8} \leq \frac{64}{-12.8}$$

$$x \leq -5$$

14. $-2.6a < 7.8$

$$\frac{-2.6a}{-2.6} > \frac{7.8}{-2.6}$$

$$a > -3$$

15. $6y > 48$

$$\frac{6y}{6} > \frac{48}{6}$$

$$y > 8$$

Solving Inequalities Using Multiplication or Division Assignment

Write and solve each inequality.

16. Seven times a number is greater than 28.

$$7x > 28$$

$$\frac{7x}{7} > \frac{28}{7}$$

$$x > 4$$

17. Negative six times a number is at least 14.

$$-6x \geq 14$$

$$\frac{-6x}{-6} \leq \frac{14}{-6}$$

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

18. Twenty five percent of a number is greater than or equal to 90.

$$0.25x \geq 90$$

$$\frac{0.25x}{0.25} \geq \frac{90}{0.25}$$

$$x \geq 360$$

19. A half of a number is less than 24.

$$\frac{1}{2}x < 24$$

$$(2)\left(\frac{1}{2}x\right) < 24(2)$$

$$x < 48$$

Write and solve each inequality.

20. Suppose we need at least 6 apples to make a plate of apple pie. If we have 36 apples, how many plate of apple pie can we make?

$$6x \geq 36$$

$$\frac{6x}{6} \geq \frac{36}{6}$$

$$x \geq 6$$

21. The price of a ceramic tile varies depending on its design. If cost of the ceramic tile cost at most \$2.95 each, how many ceramic tile can Greg buy with his \$100?

$$2.95x \leq 100$$

$$\frac{2.95x}{2.95} \leq \frac{100}{2.95}$$

$$x \leq 33.89$$

$$x \leq 33 \text{ ceramic tiles}$$