Name: _____ Period: _____ Date: _____

Solving Inequalities Using Multiplication or Division Bell Work

Solve each inequality.

1. $-\frac{x}{9} \leq -3$
2. $\frac{5}{7}a \geq -15$
3. $-\frac{y}{9} > 11$
4. $-\frac{x}{4} < 11$
5. $-12a \geq -72$
6. $-\frac{2y}{3} > 18$
7. $2.4x \leq -14.4$
8. $\frac{a}{15} > 6$
9. $\frac{2y}{5} < -\frac{3}{20}$

Write and solve each inequality.

10. Negative eleven times a number is higher than 22.

11. Three fourths of a number is fewer than 8.

Write and solve the inequality.

12. Kevin has a gift check for $100. If the cost of a t-shirt is at most $3.45 each, how many is t-shirt can Kevin get?

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Solving Inequalities Using Multiplication or Division Bell Work

ANSWER

Solve each inequality.

1. $-\frac{x}{9} \leq -3$

   $(-9)\left(-\frac{x}{9}\right) \geq -3(-9)$

   $x \geq 27$

2. $\frac{5}{7}a \geq -15$

   $\left(\frac{7}{5}\right)\left(\frac{5}{7}a\right) \geq -15\left(\frac{7}{5}\right)$

   $a \geq -21$

3. $-\frac{y}{9} > 11$

   $(-9)\left(-\frac{y}{9}\right) < 11(-9)$

   $y < -33$

4. $-\frac{x}{4} < 11$

   $(-4)\left(-\frac{x}{4}\right) > 11(-4)$

   $x > -44$

5. $-12a \geq -72$

   $\frac{-12a}{-12} \leq \frac{-72}{-12}$

   $a \leq 6$

6. $-\frac{2y}{3} > 18$

   $\left(\frac{-3}{2}\right)\left(\frac{-2y}{3}\right) < 18\left(\frac{-3}{2}\right)$

   $y < -27$

7. $2.4x \leq -14.4$

   $\frac{2.4x}{2.4} \leq \frac{-14.4}{2.4}$

   $x \leq -6$

8. $\frac{a}{15} > 6$

   $\frac{a}{15}(15) > 6(15)$

   $a > 90$

9. $\frac{2y}{5} < -\frac{3}{20}$

   $\frac{2y}{5}\left(\frac{5}{2}\right) < -\frac{3}{20}\left(\frac{5}{2}\right)$

   $y < -\frac{3}{8}$

Write and solve each inequality.

10. Negative eleven times a number is higher than 22.

    $-11x > 22$ $\quad \frac{-11x}{-11} < \frac{22}{-11}$ $\quad x < 2$

11. Three fourths of a number is fewer than 8.

    $\frac{3}{4}x < 8$ $\quad \left(\frac{4}{3}\right)\left(\frac{3}{4}x\right) < 8\left(\frac{4}{3}\right)$ $\quad x < \frac{32}{3}$

Write and solve the inequality.

12. Kevin has a gift check for $100. If the cost of a t-shirt is at most $3.45 each, how many is t-shirt can Kevin get?

    $3.45x \leq 100$ $\quad \frac{3.45x}{3.45} \leq \frac{100}{3.45}$ $\quad x \leq 28.9855$

    $x \leq 28$