

Solving Inequalities by Multiplication and Division

Solve each inequality. Show all work and box/circle your final answer.

1. $14g > 56$

$$\frac{14}{14} \frac{g}{14} > \frac{56}{14}$$

$$g > 4$$

2. $11w \leq 77$

$$\frac{11}{11} \frac{w}{11} \leq \frac{77}{11}$$

$$w \leq 7$$

3. $20b \geq -120$

$$\frac{20}{20} \frac{b}{20} \geq \frac{-120}{20}$$

$$b \geq -6$$

4. $-8r < 16$

$$\frac{-8}{-8} \frac{r}{-8} < \frac{16}{-8}$$

$$r > -2$$

5. $-15p \leq -90$

$$\frac{-15}{-15} \frac{p}{-15} \leq \frac{-90}{-15}$$

$$p \geq 6$$

6. $\frac{x}{4} < 9$

$$4 \cdot \frac{x}{4} < 9 \cdot 4$$

$$x < 36$$

7. $\frac{a}{9} \geq -15$

$$9 \cdot \frac{a}{9} \geq -15 \cdot 9$$

$$a \geq -135$$

8. $-\frac{p}{7} > -9$

$$-7 \cdot \frac{p}{7} > -9 \cdot -7$$

$$p < 63$$

9. $-\frac{t}{12} \geq -90$

$$-12 \cdot \frac{t}{12} \geq -90 \cdot -12$$

$$t \leq 1080$$

10. $5z < -90$

$$\frac{5z}{5} < \frac{-90}{5}$$

$$z < -18$$

11. $-13m > -26$

$$\frac{-13m}{-13} > \frac{-26}{-13}$$

$$m < 2$$

12. $\frac{k}{5} \leq -17$

$$5 \cdot \frac{k}{5} \leq -17 \cdot 5$$

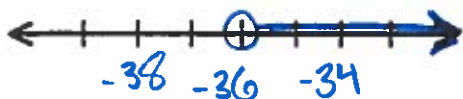
$$k \leq -85$$

EXTEND YOUR KNOWLEDGE! Solve and graph each inequality. Be sure to label your number line. Show all work and box/circle your final answer.

13. $-y < 36$

$$\frac{-y}{-1} < \frac{36}{-1}$$

$$y > -36$$



14. $-16c \geq -224$

$$\frac{-16c}{-16} \geq \frac{-224}{-16}$$

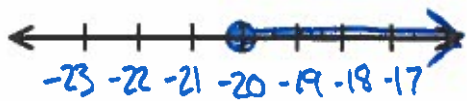
$$c \leq 14$$



15. $-\frac{h}{10} \leq 2$

$$-10 \cdot \frac{h}{10} \leq 2 \cdot -10$$

$$h \geq -20$$



16. $\frac{d}{12} < 12$

$$12 \cdot \frac{d}{12} < 12 \cdot 12$$

$$d < 144$$

