

SOLVING LINEAR INEQUALITIES WORKSHEET

MULTI-STEP INEQUALITIES

Solve the following inequalities algebraically. Represent your solution on a number line.

1. $3x + 1 > 10$

2. $-1 + 6y < 17$

3. $\frac{3b - 5}{2} \geq 5$

4. $-q - 4 \leq 8 + 2q$

5. $8 - 2c > 18 + 3c$

6. $-3d - 2 \geq d + 10$

7. $3(z - 2) \geq 12$

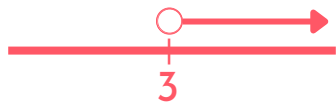
8. $-2(p + 4) \leq -6$

ANSWERS

Solve the following inequalities algebraically. Represent your solution on a number line.

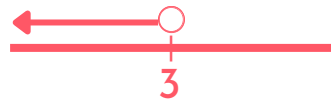
1. $3x + 1 > 10$

$$x > 3$$



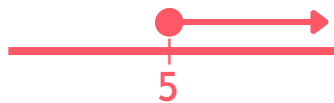
2. $-1 + 6y < 17$

$$y < 3$$



3. $\frac{3b - 5}{2} \geq 5$

$$x \geq 5$$



4. $-q - 4 \leq 8 + 2q$

$$q \geq -4$$



5. $8 - 2c > 18 + 3c$

$$-2 > c$$



6. $-3d - 2 \geq d + 10$

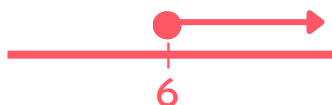
$$d \leq -3$$

(Remember that when you multiply or divide by a negative number, the inequality sign flips)



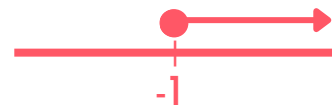
7. $3(z - 2) \geq 12$

$$z \geq 6$$



8. $-2(p + 4) \leq -6$

$$p \geq -1$$





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