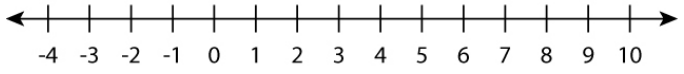
Inequalities with Variables on Both Sides

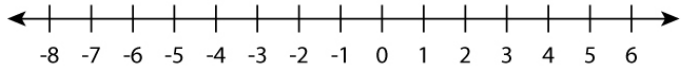
MATH MONKS

Solve the following inequalities. Graph your solutions.

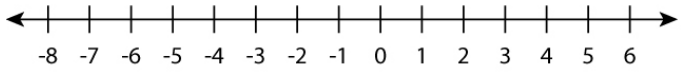
① $2(x - 2) \leq -4(1 - x)$



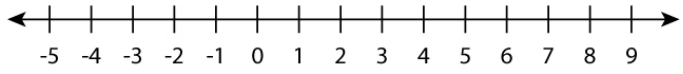
② $28(2 - b) > 2b + 2$



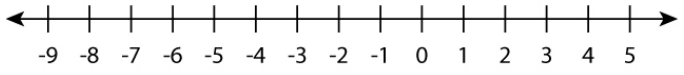
③ $3y - 5 < 2(17 - 5y)$



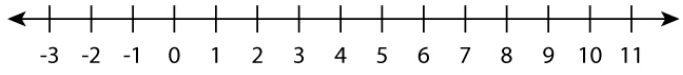
④ $3 - 5a \leq 2(a + 5)$



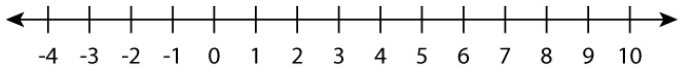
⑤ $-5(x + 2) \geq -3(x + 4)$



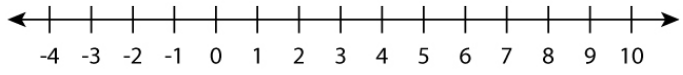
⑥ $6x + 13 < 5(2x - 3)$



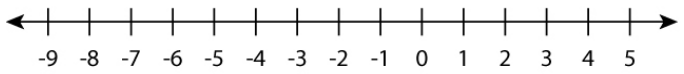
⑦ $6(3 - a) \leq 8a - 10$



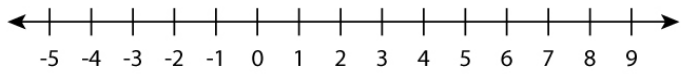
⑧ $4(3 - 2x) \leq 6x + 4$



⑨ $2c - 5 < -21 - 2c$



⑩ $-8x + 2x - 16 < -5x + 7x$



Inequalities with Variables on Both Sides

MATH MONKS

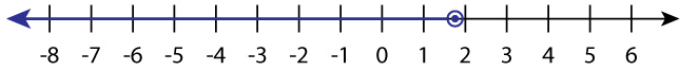
Answers

① $2(x - 2) \leq -4(1 - x)$

$x \geq 0$

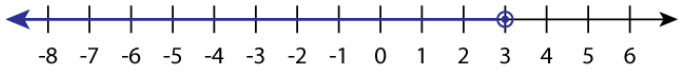
② $28(2 - b) > 2b + 2$

$b < \frac{9}{5}$



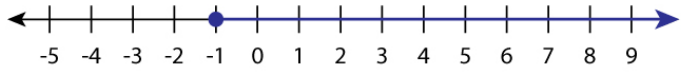
③ $3y - 5 < 2(17 - 5y)$

$y < 3$



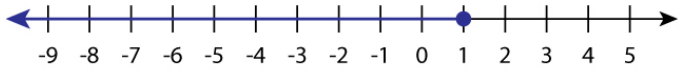
④ $3 - 5a \leq 2(a + 5)$

$a \geq -1$



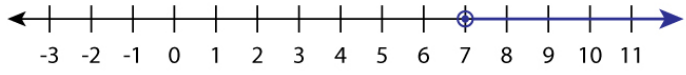
⑤ $-5(x + 2) \geq -3(x + 4)$

$x \leq 1$



⑥ $6x + 13 < 5(2x - 3)$

$x > 7$

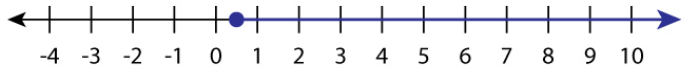


⑦ $6(3 - a) \leq 8a - 10$

$a \geq 2$

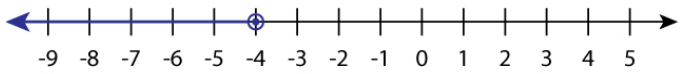
⑧ $4(3 - 2x) \leq 6x + 4$

$x \geq \frac{4}{7}$



⑨ $2c - 5 < -21 - 2c$

$c < -4$



⑩ $-8x + 2x - 16 < -5x + 7x$

$x > -2$