



# Solving Inequalities



← REVISE THIS TOPIC

1 Solve  $x - 5 < 10$  [1 mark]

---

---

Answer  $x < 15$

2 Solve  $y + 1 > 8$  [1 mark]

---

---

Answer  $y > 7$

3 Solve  $3w \leq 12$  [1 mark]

---

---

Answer  $w \leq 4$

4 Solve  $2a \geq -12$  [1 mark]

---

---

Answer  $a \geq -6$

5 Solve  $\frac{t}{2} > 8$  [1 mark]

---

---

Answer  $t > 16$





6 Solve  $5p - 2 < 28$

[2 marks]

$$5p < 30$$

Answer \_\_\_\_\_

$$p < 6$$

7 Solve  $2q + 1 \leq 15$

[2 marks]

$$2q \leq 14$$

Answer \_\_\_\_\_

$$q \leq 7$$

8 Solve  $5r - 15 > 35$

[2 marks]

$$5r > 50$$

Answer \_\_\_\_\_

$$r > 10$$

9 Solve  $9c - 12 < 51$

[2 marks]

$$9c < 63$$

Answer \_\_\_\_\_

$$c < 7$$

10 Solve  $11 + 5d \geq 26$

[2 marks]

$$5d \geq 15$$

Answer \_\_\_\_\_

$$d \geq 3$$





11 Solve  $4(x + 3) > 20$

[2 marks]

$$4x + 12 > 20$$

$$4x > 8$$

$$x > 2$$

Answer \_\_\_\_\_

12 Solve  $6(y - 2) \geq 18$

[2 marks]

$$6y - 12 \geq 18$$

$$6y \geq 30$$

$$y \geq 5$$

Answer \_\_\_\_\_

13 Solve  $20 \leq 5w + 5$

[2 marks]

$$15 \leq 5w$$

$$5 \leq w$$

$$w \geq 5$$

Answer \_\_\_\_\_

14 Solve  $\frac{3y}{4} > 6$

[2 marks]

$$3y > 24$$

$$y > 8$$

Answer \_\_\_\_\_

15 Solve  $\frac{a}{3} + 2 \geq 5$

[2 marks]

$$\frac{a}{3} \geq 3$$

$$a \geq 9$$

Answer \_\_\_\_\_





16

Solve  $\frac{b+2}{3} < 4$

[2 marks]

$b+2 < 12$

Answer  $b < 10$

17

Solve  $7y + 5 < 2y + 35$

[3 marks]

$5y + 5 < 35$

$5y < 30$

Answer  $y < 6$

18

Solve  $12 < 3n < 30$

[2 marks]

Answer  $4 < n < 10$

19

Solve  $8 \leq m - 3 \leq 10$

[2 marks]

Answer  $11 \leq m \leq 13$

20

Solve  $1 \leq 2t - 5 \leq 11$

[3 marks]

$6 \leq 2t \leq 16$

Answer  $3 \leq t \leq 8$





21 Work out the largest integer  $x$ , for which  $3x + 5 < 26$  [3 marks]

$$3x < 21$$

$$x < 7$$

6

Answer \_\_\_\_\_

22 Work out the largest integer  $x$ , for which  $2x - 3 < 18$  [3 marks]

$$2x < 21$$

$$x < 10.5$$

10

Answer \_\_\_\_\_

23 Work out the largest integer  $x$ , for which  $5x + 7 \leq 47$  [3 marks]

$$5x \leq 40$$

$$x \leq 8$$

8

Answer \_\_\_\_\_

24 Work out the smallest integer  $x$ , for which  $10x - 4 > 56$  [3 marks]

$$10x > 60$$

$$x > 6$$

7

Answer \_\_\_\_\_



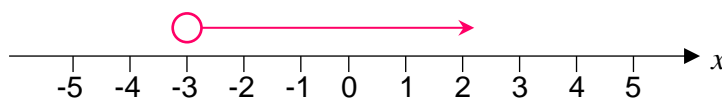
25 (a) Solve  $x + 5 > 2$

[1 mark]

Answer  $x > -3$

(b) Represent your answer to part (a) on the number line below.

[2 marks]



26 (a) Solve  $3x + 4 < 10$

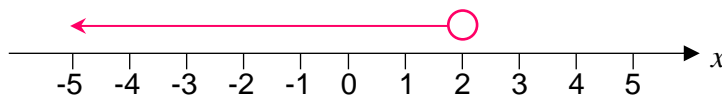
[2 marks]

$3x < 6$

Answer  $x < 2$

(b) Represent your answer to part (a) on the number line below.

[2 marks]



27 (a) Solve  $2x - 1 \leq -3$

[2 marks]

$2x \leq -2$

Answer  $x \leq -1$

(b) Represent your answer to part (a) on the number line below.

[2 marks]

