

Name: _____ Date: _____

1. For each of the following, match the statement to the correct inequality.

x is greater than 2	$x < -4$
x is less than or equal to 2	$x \geq 4$
x is at least 4	$-4 \leq x \leq 2$
x is no more than 4	$x > 2$
x is less than -4	$x < 4$
x is between -4 and 2 inclusive	$x \leq 2$

(2)

2. $x > 3$

Write down *two* possible integer values of x .

..... 4, 5 (1)

3. $x \leq -2$

Write down three possible integer values of x .

..... -5, -3, -2 (1)

4. $-2 < x \leq 3$

Write down all possible integer values of x .

..... -1, 0, 1, 2, 3 (1)

5. Solve $x + 4 > 9$

..... $x > 5$ (1)

6. Solve $x - 7 \leq 5$

..... $x \leq 12$ (1)

7. Solve $2x + 1 < 7$

..... $x < 3$ (2)

8. Solve $3x - 5 \geq 10$

..... $x \geq 5$ (2)

9. Solve $\frac{x}{4} > 3$

..... $x > 12$ (2)

10. Solve $\frac{x+2}{3} \leq 5$

..... $x \leq 13$ (2)

11. Solve $4x + 3 < 2x + 11$

..... $x < 4$ (2)

12. Solve $7x - 2 \geq 3x + 10$

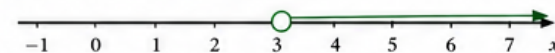
..... $x \geq 3$ (2)

13. Solve $5 - 2x < 11$

..... $x > -3$ (2)

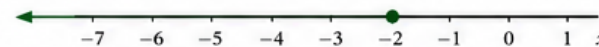


14. On the number line, show the inequality $x > 3$.



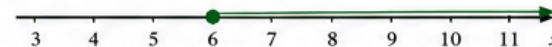
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15. On the number line, show the inequality $x \leq -2$.



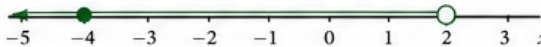
(1)

16. On the number line, show the inequality $x \geq 6$.



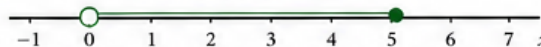
(1)

17. On the number line, show the inequality $-4 \leq x < 2$.



(1)

18. On the number line, show the inequality $0 < x \leq 5$.



(1)

19. Solve $2 < 2x < 10$

Write down all possible integer values of x .

..... 2, 3, 4 (2)

20. Solve $-6 \leq 3x < 9$

Write down all possible integer values of x .

..... -2, -1, 0, 1, 2 (2)

21. Solve $3 < 2x - 1 < 10$

Write down all possible integer values of x .

..... 2, 3, 4, 5 (3)

22. Solve $-5 \leq 4x + 3 < 11$

Write down all possible integer values of x .

..... -2, -1, 0, 1 (3)

23. A teacher wants students to score at least 80 marks on a test.

A student has already scored 53 marks.

Each question is worth 3 marks.

Write and solve an inequality to find how many more complete questions they must answer correctly.

..... $3x + 53 \geq 80 \Rightarrow x \geq 9$ (3)

24. A lift can safely carry no more than 500 kg.

The lift already contains 3 adults weighing 72 kg each.

Children each weigh 35 kg.

Write and solve an inequality to find the maximum number of children.

..... $72 \times 3 + 35x \leq 500 \Rightarrow x \leq 8$ (3)

25. Solve $-2x < 8$

..... $x > -4$ (2)

26. Solve $-5x \geq 15$

..... $x \leq -3$ (2)

27. Solve $12 - 3x > 0$

..... $x < 4$ (2)

28. Solve $-2(3x - 1) \leq 10$

..... $x \geq -2$ (2)

