Solving Inequalities

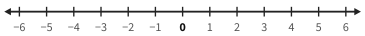
1

Solve $2x + 3 < 11$ and show the answer on the number line.

− 3 both sides

÷ 2 both sides

$2x < 8$



○ open circle for < or > (not included) ● filled circle for ≤ or ≥ (included)

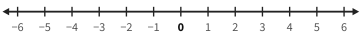
Answer _____

2

Solve $3x - 2 \geq 7$ and show the answer on the number line.

+ 2 both sides

$3x \geq 9$



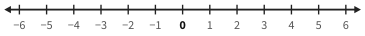
Answer _____

3

Solve $4x + 1 > 9$ and show the answer on the number line.

− 1 both sides

$4x > 8$



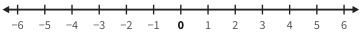
Answer _____

4

Solve $5x - 4 \leq 16$ and show the answer on the number line.

+ 4 both sides

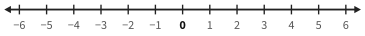
$5x \leq 20$



Answer _____

5

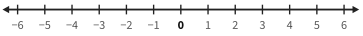
Solve $2x + 7 \geq 1$ and show the answer on the number line.



Answer _____

6

Solve $6x - 5 < 13$ and show the answer on the number line.



Answer _____

7

x is a whole number greater than 0. Write down all the values of x that satisfy $3x + 1 < 13$

Answer _____

8

I think of a whole number, double it and add 5. The answer is less than 17. What is the largest number I could have chosen?

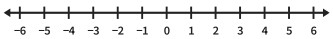
Answer _____

The Maths Habit

Solving Inequalities *further practice*

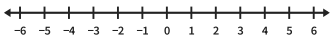
9 Solve $5x - 3 > 12$ and show the answer on the number line.

Answer _____



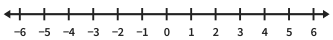
10 Solve $5x + 2 \leq 2x + 14$ and show the answer on the number line.

Answer _____



11 Solve $3(x - 2) < 9$ and show the answer on the number line.

Answer _____

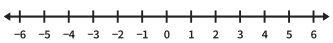


12 A film club costs £12 a month plus £3 for each film rented. Ria will spend no more than £30 in a month. What is the greatest number of films she can rent?

Answer _____

13 Solve $-3 < 2x + 1 \leq 7$ and list the whole numbers that satisfy it.

Whole numbers _____



14 A rectangle has sides of $(x + 4)$ cm and x cm. Its perimeter must be less than 40 cm. Find the greatest whole number value of x.

Answer _____

15 Gym A costs £60 to join, then £18 a month. Gym B costs £30 a month and nothing to join. What is the smallest number of whole months for which Gym A costs less in total?

Answer _____

16 Is $x = 4$ a solution of $3x - 5 > 7$? Explain.

Answer _____

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