

GCSE Maths: Negative numbers, brackets and letters on both sides (Foundation): worksheet

GCSE Maths - Inequalities - Foundation - Lesson 10.4

Name: _____

Date: _____

Score: _____

13 questions. Write your answers in the spaces. Answers and step-by-step help are free at websink.site/gcse/maths/ch10-inequalities/foundation/negative-numbers-brackets-and-letters-on-both-sides/

Exercise 10E Negative numbers, brackets and letters on both sides

Non-calculator

1 Solve each inequality.

(a) $-2x < 8$

Answer: _____

(b) $-5x \geq 20$

Answer: _____

(c) $-x + 3 > 1$

Answer: _____

(d) $-2x + 7 \leq 1$

Answer: _____

(e) $-3x + 10 > 4$

Answer: _____

(f) $-4x + 1 \geq 13$

Answer: _____

2 Solve each inequality.

(a) $5x + 2 < 3x + 10$

Answer: _____

(b) $4x - 1 \geq 2x + 9$

Answer: _____

(c) $7x + 3 > 2x + 13$

Answer: _____

(d) $3x + 5 \leq 5x + 1$

Answer: _____

(e) $2x - 3 < 6x + 5$

Answer: _____

(f) $8x + 1 \geq 3x - 9$

Answer: _____

3 Solve each inequality. Expand the brackets first.

(a) $3(x + 2) > 15$

Answer:

(b) $2(x - 3) \leq 10$

Answer:

(c) $4(2x + 1) < 36$

Answer:

(d) $5x \geq 2(x + 6)$

Answer:

(e) $2(3x - 1) > 4(x + 2)$

Answer:

(f) $5(x - 2) \geq 3(x + 4)$

Answer:

4 Solve each inequality.

(a) $\frac{x + 1}{2} > 3$

Answer:

(b) $\frac{2x - 1}{3} \leq 5$

Answer:

(c) $\frac{x + 4}{5} < -1$

Answer:

(d) $\frac{x}{2} - 3 \geq 1$

Answer:

5 Solve $x + 5 < 2x + 3$.

Answer:

6 Solve $-x < 6$.

Answer:

7 Priya solves $-3x < 12$ and writes $x < -4$. Explain her mistake and write the correct solution.

Answer:

8 Jack solves $2 - x > 5$ and gets $x > -3$. Is he correct? Test a value to decide.

Answer:

9 Without solving first, use $x = 0$ to decide whether the solution of $4 - 2x < 10$ is $x > -3$ or $x < -3$. Then solve it to check.

Answer:

10 Solve $5 - 2x \geq 17$. Write down the largest whole number that satisfies it.

Answer:

11 Find the largest whole number n such that $3n - 4 > 5n - 20$.

Answer:

12 Solve $2(3x - 1) > 4(x + 2)$. Then say whether $x = 5$ is a solution.

Answer:

13 Solve $3(2 - x) > 6 - 5x$.

Answer:

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