GED Math Worksheet: Algebra Inequalities

Directions: Solve each inequality. Include your steps. Word problems will require setting up and solving the inequality.

1. $5x - 3 > 2x + 9$

2. $-2(x + 3) < 4$

3. $7 - 3x \geq 1$

4. $(2/5)x + 3 < 7$

5. $-4x + 2 \geq 3x - 5$

6. $5(x - 2) \leq 3x + 4$

7. $6 - 2x > 4x + 18$

8. $(2/3)x + 5 \leq 11$

9. $-5(x - 1) < 2x + 9$

10. $4x + 1 \geq 2(2x - 3)$

11. $3x + 4 < 5x < 16 + x$

12. $-2 < x/3 + 1 \leq 4$

13. $1 < 2x - 5 < 9$

14. $-10 \leq 5 - x < 3$

15. $2 < (x-4)/2 \leq 5$

16. Three added to the product of -4 and a number is less than 5 added to the product of -3 and the number. Which inequality represents the solution for x?

17. The sum of twice a number and 5 is greater than the sum of the number and 8. Find x.

18. Five less than triple a number is at least 7 more than the number.

19. A store sells shirts for $12 each and jackets for $25 each. You want to spend less than $100. Write an inequality for the number of shirts (x) and jackets (y) you can buy.

20. One half of a number decreased by 3 is greater than one third of the same number increased by 1.

Answer Key

1. $x > 4$

2. $x > -5$

3. $x \leq 2$

4. $x < 10$

5. $x \leq 1$

6. $x \leq 7$

7. $x < -2$

8. $x \leq 9$

9. $x > -2$

10. All real numbers

11. $2 < x < 6$

12. $-9 < x \leq 9$

13. $3 < x < 7$

14. $2 \leq x < 5$

15. $8 < x \leq 14$

16. $x > -2$

17. $x > 3$

18. $x \geq 6$

19. $12x + 25y < 100$

20. $x > 12$