

NAME _____

DATE _____

Module Test **A**

Module 5

Solve and graph.

1. $x - 3 \geq -5$ _____



2. $-5 \geq x + 8$ _____



3. $-4x \geq 20$ _____



4. $-30 < 15x$ _____



5. $3x - 1 > 8$ _____



6. $5 - 4x \leq 21$ _____



7. $\frac{1}{2}x + 6 \leq 2$ _____



8. $-5x - 3 > 17$ _____



9. $x + 6 > 2x - 4$ _____



10. $-4x - 1 \leq -2x + 5$ _____



11. $3 - 4(x - 2) > -(3x - 6)$ _____



12. $-12 - (3 - 2x) > -7 + 3(x - 6)$ _____



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13. $x < 4$ and $x > 6$ _____



14. $x > 4$ or $x > 5$ _____



15. $x - 4 > 7$ or $x + 3 < 20$ _____



16. $2x - 6 \leq -6$ and $x - 1 > -7$ _____



17. $-7 \leq 3x - 1 \leq 5$ _____



18. $\frac{4}{5}x - 4 \geq 12$ or $\frac{1}{3}x + 1 \geq -2$ _____



Write an inequality and solve it to answer each problem.

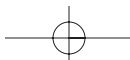
19. Rosalind scored 82 and 88 on her first two algebra tests. What must she score on her third test so her average score is above 85?

20. Roberta earns a base salary of \$250 per week, plus a commission of 30% of her total sales. What must her total sales be if she wants to make more than \$500 this week?

21. Consider the conjunction $-5 \leq \frac{1}{2}x - 4 < -\frac{5}{2}$.

a. What two inequalities are shown by the conjunction?

b. Solve each inequality from part a, showing all steps.



c. Solve the conjunction $-5 \leq \frac{1}{2}x - 4 < -\frac{5}{2}$ by using inverse operations on all three parts.

d. Explain why the solutions you found in parts b and c are equivalent. Use a graph to support your answer.

