NAME _____ DATE _____

Module Test B

Module 5

Solve and graph.

1. $\frac{x}{4} < -2$ _____

2. $x - 6 \geq -4$ _____

3. $2x \geq 6$ _____

4. $0 \geq x - 4$ _____

5. $-2x - 4 \geq 6$ _____

6. $13 > \frac{2}{3}x + 15$ _____

7. $6 - 8x \geq 22$ _____

8. $-4x - 3 > -3$ _____

9. $4x - 2 > 3x$ _____

10. $6x - 5 \geq 3x + 13$ _____

11. $-4(x - 2) > 5(3 - x)$ _____

12. $-2(x - 1) + 4 < 3 - (x - 4)$ _____

13. $x > 5$ and $x > 7$ _____

14. $x < 0$ or $x > 0$ _____

15. $-2x > -4$ and $3x \geq 9$ _____

16. $5x - 2 < 8$ or $-x - 1 < -2$ _____

17. $\frac{3}{4}x - 1 \geq 5$ and $6 - \frac{1}{2}x \leq 1$ _____

18. $-12 \leq -4x - 4 \leq 20$ _____

Write an inequality and solve it to answer each problem.

19. Oscar is going to join a gym. Big Muscles charges a $75 initiation fee, plus a monthly fee of $40. Buff Bodies charges a $150 initiation fee, plus a $25 monthly fee. For how many months must Oscar belong to Buff Bodies for it to be the less expensive choice?

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20. The sum of three consecutive integers is at least 80. What is the least trio of integers for which this is true?

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21. Consider the conjunction $0 < 8 - 4x \leq 16$.

a. What two inequalities are shown by the conjunction?

_____

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

c. Solve the conjunction $0 < 8 - 4x \leq 16$ 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.