

Chapter 5 — Inequalities

Worksheet B: Independent Practice

Name: _____ Grade: _____ Date: _____

1. Solve and graph: $-4n \geq -20$

2. A box can hold at most 40 kg. Each item weighs 2.5 kg. Write and solve an inequality for the maximum number of items.

3. Solve and graph: $x - 7 < -3$

4. Solve and graph: $-m > 5$

5. A scholarship requires an average of at least 75 and at most 90. A student scores 88, 72, and 91. Does the student qualify?

6. Solve and graph: $s \div 3 + 2 > 6$

7. Solve and graph: $7 - 2y > 15$

8. Solve and graph: $4p-3 \geq 2p+5$

9. A student's grade average must be above 75 to pass. Scores are 68, 72, and 80. What score is needed on a fourth test?

10. Write and graph a compound inequality for: x is greater than or equal to 1 and less than 6.

11. Solve and graph: $2(3x-4) > 10$

12. Solve and graph: $t \div (-4) - 1 \geq 3$

13. Solve and graph: $-2r - 5 \leq 9$

14. Solve and graph: $5x + 2 \leq 17$

15. Solve and graph: $3x + 4 < 5x - 6$

16. A rectangular sign has a length of 12 cm and a width of $(3x-2)$ cm. Its perimeter must be less than 50 cm. Write and solve an inequality for x .

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17. List three values that satisfy $x > -4$ and three values that do not satisfy it.

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18. Write an inequality for: Three times a number decreased by 4 is at most 17. Then solve and graph.

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19. A student solves $-6x \leq 18$ and writes $x \leq -3$. Identify the error and write the correct solution.
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20. Solve and graph: $5-2(x+3)\leq 11$

