Name _____ Date _____ Class _____

CHAPTER 3 — At-Home Practice
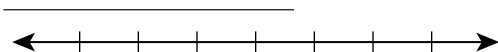### Solving Inequalities

Solve and graph.

1. $2x - 9 < 15$

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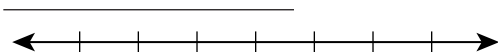
2. $4 - 5b > 19$

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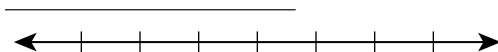
3. $7p + 9 - 4p \geq 15$

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4. $2(k + 1) < 6$

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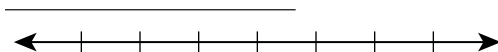
5. $3 > 4 - x$

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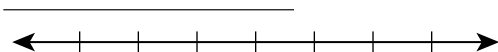
6. $4 + 6y \leq -1 + 11y$

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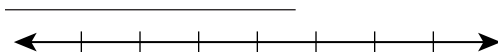
Solve each inequality for the indicated variable.

7. Solve $x + y < 5$ for x. _____

8. Solve $d > rt$ for t. _____

9. Solve $V \leq \pi r^2 h$ for h. _____

Use < or > to complete each inequality.

10. $3 + 5$ ☐ 10 **11.** $(3)5$ ☐ 16 **12.** 6.1 ☐ $1.5(4)$

Write an inequality for each statement.

13. A number p increased by 5 is less than 12. _____

14. A number n decreased by 12 is at least 21. _____

Solve each inequality.

15. $5 + y > 31$

_____

16. $f - 16 \leq 11$

_____

The answers are printed upside down at the bottom.

Answers: 1. $x < 12$ 2. $b < -3$ 3. $p \geq 2$ 4. $k < 2$ 5. $x > 1$ 6. $y \geq 1$ 7. $x < 5 - y$ 8. $t < \frac{d}{r}$ 9. $h > \frac{V}{\pi r^2}$
10. $< 11. < 12. > 13. p + 5 < 12$ 14. $n - 12 \geq 21$ 15. $y > 26$ 16. $f \leq 27$

Holt Mathematics

Family Fun
3 Crossword Inequalities

Directions

Problems
$14x + 2 > 30$
$3x \geq 12$
$-6 + x \geq 5$
$3x \geq 9$
$23 + 16x \leq x - 7$
$23 + 6x > -3x + 5$
$24 + 3x < 21$
$3x \geq -6$
$15 + 27x \leq x + 67$
$2x - 3 < 7$
$7x - 1 \geq 6$

- Each player should solve the problems to the right and circle their answers.

- Using the across and down clues at the bottom of the page, each player should match each clue with one of their solutions and write the inequality they solved to get that solution in the corresponding crossword boxes.

- Each digit, letter, and symbol should be placed in a separate box. Example: $24 + 3x \geq 21$ would need 8 boxes; one each for the 2, 4, +, 3, x, $\geq$, 2, and 1.

- A negative number only requires one box. Example: $-6 + x \geq 5$ would need 5 boxes; one each for the -6, +, x, $\geq$, and 5.

- In problems with directions, do not write the directions in the puzzle. Example: "Solve for x."

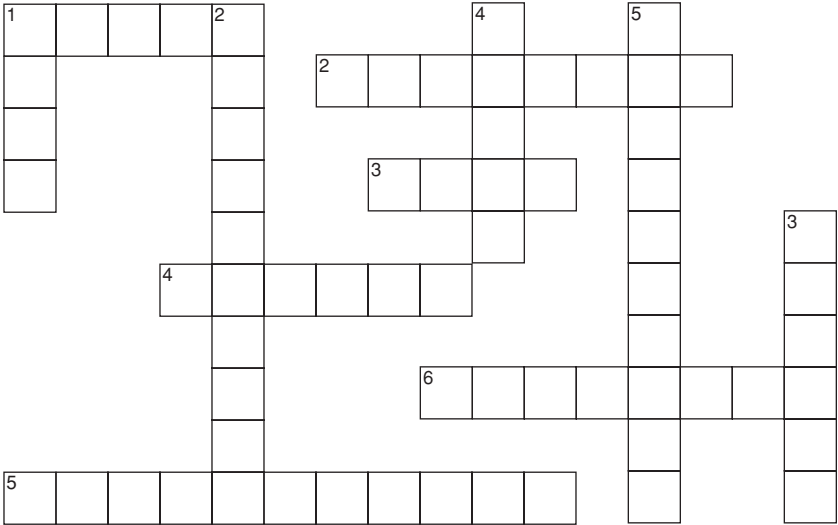- The player who completes the crossword puzzle the fastest wins the game.

Across

1. $x \geq 4$

2. $x > 2$

3. $x \geq -2$

4. $x < 5$

5. $x \leq 2$

6. $x < -1$

Down

1. $x \geq 3$

2. $x \leq -2$

3. $x \geq 1$

4. $x \geq 11$

5. $x > -2$

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