

Big Ideas Math®

**Direct Hit!****► Materials:**

- Inequality cards
- Paper
- Pencil
- Number line sheet
- Coin
- 6-sided die
- Score chart

► Directions:

Students play in pairs and alternate roles each turn. After drawing an inequality card, Player 1 solves the inequality and graphs the solution on the number line. Player 1 earns one point for a correct answer and one point for a correct graph. Player 2 flips a coin and rolls a 6-sided die to determine his "position." (Let heads represent a positive and tails represent a negative.) Player 2 marks his position on the same number line with an X. Player 2 earns one point if the X is a solution of the inequality. Both players use the score chart to keep a running total of points.

► Who Wins?

The player with the most points wins.

► Tip:

Students can shuffle the inequality cards for a more "random" review.

► Discuss:

Discuss what the solution of the inequality means. If Player 2's X lies in the shaded region of the graph, what exactly does that mean? What if Player 2's X does not lie in the shaded region of the graph?

Inequality cards for Direct Hit!

Inequality 1

$$x + 7 \geq 5$$

Inequality 2

$$11 - x \leq 5$$

Inequality 3

$$-15 + 2x \geq -9$$

Inequality 4

$$x + \frac{4}{7} < -\frac{10}{7}$$

Inequality 5

$$3x \leq -15$$

Inequality 6

$$-2x < -12$$

Inequality 7

$$4x - 10 \geq -14$$

Inequality 8

$$13 - 2x \leq 9$$

Inequality 9

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

Inequality 10

$$5 \leq x + 4 \leq 9$$

Inequality 11

$$-10 < x - 7 \leq -1$$

Inequality 12

$$5x + 11 \leq -19 \text{ or} \\ -6 - 4x < -26$$

Inequality 13

$$5 + 5x < 25 \text{ or} \\ 14 \leq 3x + 17$$

Inequality 14

$$7 \leq 6x + 13 < 31$$

Inequality 15

$$-6 < 4x - 10 < 14$$

Inequality 16

$$|x + 4| < 1$$

Inequality 17

$$|2x - 10| \geq 2$$

Inequality 18

$$|x - 3| + 14 > 16$$

Score chart for Direct Hit!

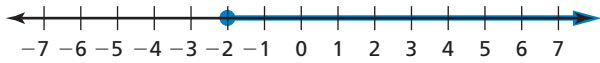
Player 1	Player 2

Score chart for Direct Hit!

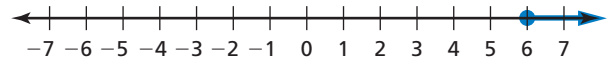
Player 1	Player 2

Answers for Direct Hit!

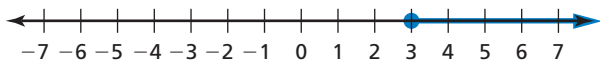
1. $x \geq -2$



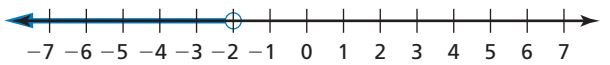
2. $x \geq 6$



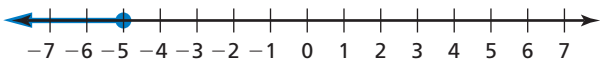
3. $x \geq 3$



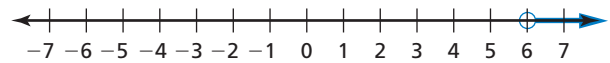
4. $x < -2$



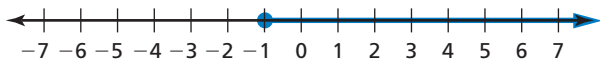
5. $x \leq -5$



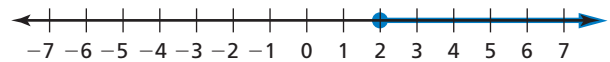
6. $x > 6$



7. $x \geq -1$



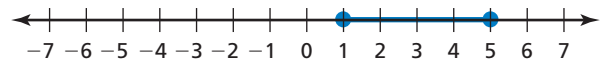
8. $x \geq 2$



9. $x \leq 3$



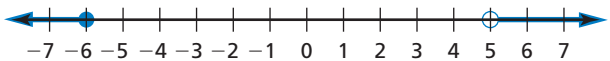
10. $1 \leq x \leq 5$



11. $-3 < x \leq 6$



12. $x \leq -6$ or $x > 5$



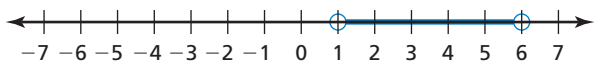
13. $x \geq -1$ or $x < 4$



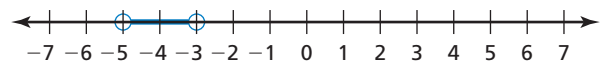
14. $-1 \leq x < 3$



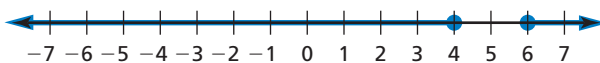
15. $1 < x < 6$



16. $-5 < x < -3$



17. $x \leq 4$ or $x \geq 6$



18. $x < 1$ or $x > 5$

