

**LESSON**  
**8-3**

# Writing Two-Step Inequalities

## Practice and Problem Solving: D

Write an inequality for each phrase. The first one is done for you.

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|---------------------------------------|---|
| 1. Four times a number is at least 2. | 2. One third of the opposite of a number is less than 12. |
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**$4x \geq 2$**

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| 3. A number increased by 5 is less than 7. | 4. Ten less than a number is more than 30. |
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| 5. Two more than 5 times a number is greater than or equal to 3. | 6. Six less than two times a number is no more than 17. |
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Write an inequality for each situation. Show your work. The first one is done for you.

7. An employee of a car wash earns \$12 for each car she washes. She always saves \$50 of her weekly earnings. This week, she wants to have at least \$100 in spending money. What is the fewest number of cars she must wash?

**Twelve times the number of cars she washes minus \$50 for her savings must be greater than or equal to \$100. Twelve times the number of cars,  $n$ , is  $12n$ . Subtract \$50 for her savings:  $12n - 50$ . This has to be at least \$100, so  $12n - 50 \geq 100$ .**

8. A video-game enthusiast saved \$750 to spend on a video game player and games. The player costs \$400. The games cost \$49 each. At most, how many games can the enthusiast buy along with the player?

9. A health-food producer has 250 samples of a new snack to distribute in the mall. The producer has to keep at least 50 samples for display in the health-food store for the product launch. How long will the samples last if consumers are taking the samples at a rate of 25 every hour?