

One-Step Inequality Word Problems

Write and solve an inequality for each problem. Then fill in the blank to answer the question.

1

Lara wants to make room on her bookshelf for some new books. After she donates 14 books to her local library, she still has over 50 books left on her bookshelf. How many books did Lara originally have on her bookshelf?

$$x - 14 > 50$$

$$x > 64$$

Lara had more than 64 books on her bookshelf.

2

Colin has 45 minutes until he needs to leave for his piano lesson. He spends 27 minutes watching an episode of his favorite TV show. Then he wants to play a game on his tablet. At most, how long can Colin spend playing the game before he needs to leave?

$$x + 27 \leq 45$$

$$x \leq 18$$

Colin can play the game for at most 18 minutes.

3

The owner of Charlotte's Chocolates moves a display of boxes of truffles to the front of the store. Each box costs \$20. The owner hopes to make at least \$100 selling the boxes of truffles this month. What is the minimum number of boxes she needs to sell this month?

$$20x \geq 100$$

$$x \geq 5$$

The owner needs to sell at least 5 boxes of truffles.

4

Eleanor sets a budget for each day. On Tuesday morning, she spends \$3.25 on a smoothie from Healthy Smoothie Hub. She needs to spend less than \$12.75 on lunch to stay within her budget. How much does Eleanor want to spend on Tuesday?

$$x - 3.25 < 12.75$$

$$x < 16$$

Eleanor wants to spend less than \$16 on Tuesday.

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- 5 Beth works at a pottery studio, and she has some leftover clay from her last class. She splits the clay evenly into 2 separate containers so that each container has at least 5 pounds of clay in it. What is the minimum amount of leftover clay Beth has?

$$\frac{x}{2} \geq 5$$
$$x \geq 10$$

Beth has at least 10 pounds of leftover clay.

- 6 Gabe is practicing for his upcoming track meet. One lap around the track is $\frac{1}{4}$ of a mile. Gabe sets a goal to run more than 2 miles today. How many laps should Gabe run to meet his goal?

$$\frac{1}{4}x > 2$$
$$x > 8$$

Gabe should run more than 8 laps to meet his goal.

- 7 Leo's soccer team went out to eat after their game. Leo's coach got a large platter of wings for the team. They split the wings equally between all 15 team members, and each team member got at least 5 wings. What was the minimum number of wings on the platter?

$$\frac{x}{15} \geq 5$$
$$x \geq 75$$

There were at least 75 wings on the platter.

- 8 Kelly runs the Dragonfly Kids Camp every summer. When planning cabin arrangements, she decides to put 16 campers in each cabin. Unfortunately, there won't be as many full cabins as Kelly planned since fewer than 240 campers signed up. At most, how many full cabins will there be?

$$16x < 240$$
$$x < 15$$

Since there will be fewer than 15 full cabins, there will be at most 14 full cabins.

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