

Two-Step Inequality Word Problems

Inequalities and steps for solving may vary.

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

- 1 A taxi company charges a flat fee of \$3.50 per ride plus an additional \$0.65 per mile. If Ian has only \$10, what is the farthest he can ride?

$$\begin{aligned} 0.65n + 3.50 &\leq 10 \\ 0.65n &\leq 6.50 \\ n &\leq 10 \end{aligned}$$

Ian can ride at most 10 miles.

- 2 Hannah earned 140 prize tickets playing pinball at Gamer Grounds. She spends 85 tickets on a bracelet and the rest of her tickets on candies that cost 10 tickets each. At most, how many candies can Hannah get?

$$\begin{aligned} 10n + 85 &\leq 140 \\ 10n &\leq 55 \\ n &\leq 5.5 \end{aligned}$$

Since Hannah cannot get 0.5 of a candy, she can get at most 5 candies.

Hannah can get at most 5 candies.

- 3 The student council at Deer Creek Middle School is organizing a dance to raise money for their end-of-year trip. They want to raise at least \$400. Tickets are priced at \$4 each, and they already spent \$25 on decorations. What is the minimum number of tickets they have to sell to reach their goal?

$$\begin{aligned} 4n - 25 &\geq 400 \\ 4n &\geq 425 \\ n &\geq 106.25 \end{aligned}$$

Since they cannot sell 106.25 tickets, they need to sell at least 107.

They have to sell at least 107 tickets to reach their goal.

- 4 Trisha is saving \$25 a week to go on a vacation. She determines that she will need \$350 for the vacation, but she also wants to have over \$100 left in her bank account after the trip. How many weeks should Trisha save?

$$\begin{aligned} 25n - 350 &> 100 \\ 25n &> 450 \\ n &> 18 \end{aligned}$$

Since Trisha needs to leave more than \$100 in her account, she needs to save for 19 weeks.

Trisha should save for 19 weeks.

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5

Charlotte is saving money for a new phone, and she wants to have at least \$545 saved before she goes to buy one. So far, she has saved \$225. She plans to save \$40 each week going forward. In how many weeks will Charlotte have saved enough to buy a phone?

$$40n + 225 \geq 545$$

$$40n \geq 320$$

$$n \geq 8$$

Charlotte will have enough money in 8 weeks.

6

Aaron has \$25 to spend at the carnival. Admission is \$4 and the ride tickets are \$1.25 each. What is the maximum number of ride tickets that Aaron can buy?

$$1.25n + 4 \leq 25$$

$$1.25n \leq 21$$

$$n \leq 16.8$$

Since Aaron cannot buy 0.8 of a ticket, he can buy at most **16** tickets.

Aaron can buy at most 16 tickets.

7

Jamal has a \$50 gift card to his favorite comic book store, Hero Destination. The store is running a deal where all of their comics are \$4.75 each if you buy them online. If the store charges a flat shipping fee of \$7.25, what is the maximum number of comic books Jamal can buy without going over \$50?

$$4.75n + 7.25 \leq 50$$

$$4.75n \leq 42.75$$

$$n \leq 9$$

Jamal can buy at most 9 comic books.

8

Wyatt bought \$40 worth of materials to make braided keychains. If Wyatt sells his keychains for \$2.50 each, how many keychains must he sell to earn a profit?

$$2.50n - 40 > 0$$

$$2.50n > 40$$

$$n > 16$$

Since Wyatt has to make more than \$40, he needs to sell at least **17** keychains.

Wyatt must sell at least 17 keychains.