LESSON MAKER PRO

What Does x Mean?

Solve each equation, then connect the answer to the story.

GRADE 6 · 6.AF.B.19.a

6.AF.B.19.a "Interpret the solution of an equation in the context of the problem."

NAME _____ DATE _____

NAME THE UNKNOWN

A solution tells you the value of the unknown in a story. After you solve, say what the number counts or measures, and include its unit.

WORKED EXAMPLE

Mina has 5 loose stickers and 3 stickers on each sheet. She has 26 stickers in all. In 5 + 3x = 26, what does x mean?

1. Subtract 5: 3x = 21.
2. Divide by 3: x = 7.
3. Since x counts sheets, name the answer in sheets.

Answer: x = 7 sticker sheets.

PRACTICE 6 problems

1 A game club pays a $12 setup fee and $4 per player. The bill is $44. In 12 + 4x = 44, solve for x and tell what it means.

ANSWER _____

2 Jo has 90 minutes set aside for music practice. After practicing the same number of minutes each day for 6 days, Jo has 18 minutes left. In 90 - 6x = 18, solve for x and tell what it means.

ANSWER _____

3 A snack booth splits 48 pretzels equally among x teams. Each team gets 8 pretzels. In 48/x = 8, solve for x and tell what it means.

ANSWER _____

4 An online game awards 14 points for each completed level. Ari earns 84 points. In 14x = 84, solve for x and tell what it means.

ANSWER _____

5 Nia buys a comic for $11 and has $19 left. In x - 11 = 19, solve for x and tell what it means.

ANSWER _____

6 A skating rink charges a group $16 for admission and $2 per helmet. The group spends $34. In 16 + 2x = 34, solve for x and tell what it means.

ANSWER _____

APPLY IT Show your work

1 Friends split a $72 escape room fee equally. Each friend also pays $2 for a locker. Each person's total cost is $14. Write an equation, solve it, and explain what your solution means.

WORK SPACE

ANSWER _____

2 A school club has $60 for supplies. It buys 2 packs of markers for $18 each, then spends the rest on 6 notebooks that all cost the same amount. Write an equation, solve it, and explain what your solution means.

WORK SPACE

ANSWER _____

CHALLENGE One step up

A club has $38 for a game event. It must pay a $14 group fee and $6 per player. The equation $14 + 6x = 38$ has the solution $x = 4$. Someone says this means $4 remains after paying the fee. Explain why that is incorrect. What does x mean, and how much money remains after the club pays for everyone?

WORK SPACE AND ANSWER

ANSWER KEY

What Does x Mean?

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A game club pays a $12 setup fee and $4 per player. The bill is $44. In 12 + 4x = 44, solve for x and tell what it means.	**x = 8 players.**
2	Jo has 90 minutes set aside for music practice. After practicing the same number of minutes each day for 6 days, Jo has 18 minutes left. In 90 - 6x = 18, solve for x and tell what it means.	**x = 12 minutes of practice each day.**
3	A snack booth splits 48 pretzels equally among x teams. Each team gets 8 pretzels. In 48/x = 8, solve for x and tell what it means.	**x = 6 teams.**
4	An online game awards 14 points for each completed level. Ari earns 84 points. In 14x = 84, solve for x and tell what it means.	**x = 6 completed levels.**
5	Nia buys a comic for $11 and has $19 left. In x - 11 = 19, solve for x and tell what it means.	**x = $30, the amount Nia had before buying the comic.**
6	A skating rink charges a group $16 for admission and $2 per helmet. The group spends $34. In 16 + 2x = 34, solve for x and tell what it means.	**x = 9 helmets rented.**

PART 2 · APPLY IT

1. **72/x + 2 = 14; x = 6 friends.** Subtract 2 from each person's total to get a $12 share of the room fee. Then 72/12 = 6 friends.
2. **2(18) + 6x = 60; x = $4 per notebook.** The markers cost $36, leaving $24 for notebooks. Divide $24 by 6 to find the cost of one notebook.

CHALLENGE

x means 4 players, not $4. The club pays $14 + $6 per player, so paying for 4 players costs $38. No money remains.

Accept equivalent equations and wording that clearly identifies what x counts or measures. In the challenge, the explanation must distinguish the number of players from an amount of money.