LESSON MAKER PRO

Equation Story Studio

Turn each equation into a real-life situation.

GRADE 7 · 7.PFA.3.e

7.PFA.3.e "Create a verbal situation in context given a two-step linear equation in one variable."

NAME _____ DATE _____

MATCH THE EQUATION

A two-step equation can describe equal groups plus or minus an extra amount. Let x name one unknown amount, then make sure every number and operation in the equation appears in your situation in the same order. The equals sign tells the total or amount left.

WORKED EXAMPLE

Create a real-life situation for $7x + 9 = 44$.

1. Read $7x$ as 7 equal groups of x.
2. Read $+ 9$ as 9 extra items.
3. Use $= 44$ as the total number of items.

Answer: Seven game-token packs have x tokens each. You also have 9 loose tokens, for a total of 44 tokens.

PRACTICE 6 problems

1 Create a real-life situation for $3x + 5 = 26$.

ANSWER _____

2 Create a real-life situation for $4x - 6 = 22$.

ANSWER _____

3 Create a real-life situation for $x/2 + 8 = 17$.

ANSWER _____

4 Create a real-life situation for $8x + 3 = 35$.

ANSWER _____

5 Create a real-life situation for $6x - 4 = 32$.

ANSWER _____

6 Create a real-life situation for $2x + 11 = 31$.

ANSWER _____

APPLY IT Show your work

1 Your music club is making a points challenge. Create a situation about downloading songs that is represented by 5x + 14 = 54. Make x clear in your situation.

WORK SPACE

ANSWER _____

2 Your coding club is tracking game coins. Create a situation about completing missions that is represented by 4x - 13 = 39. Make x clear in your situation.

WORK SPACE

ANSWER _____

CHALLENGE One step up

Create a situation for 12x - 15 = 69. Then explain why the subtraction happens after the multiplication in your situation.

WORK SPACE AND ANSWER

ANSWER KEY

Equation Story Studio

GRADE 7 · 7.PFA.3.e

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Create a real-life situation for 3x + 5 = 26.	**Three sticker sheets have x stickers each, and 5 extra stickers are included. There are 26 stickers altogether.**
2	Create a real-life situation for 4x - 6 = 22.	**You earn x points in each of 4 game rounds, then use 6 points to buy a power-up. You have 22 points left.**
3	Create a real-life situation for x/2 + 8 = 17.	**You split x beads equally between 2 bracelets, then add 8 beads to one bracelet. That bracelet has 17 beads.**
4	Create a real-life situation for 8x + 3 = 35.	**Eight songs cost x credits each to download, and a bonus track costs 3 credits. The downloads cost 35 credits altogether.**
5	Create a real-life situation for 6x - 4 = 32.	**You collect x tickets at each of 6 carnival games, then spend 4 tickets on a prize. You have 32 tickets left.**
6	Create a real-life situation for 2x + 11 = 31.	**Two movie tickets cost x dollars each, and a snack costs 11 dollars. The total cost is 31 dollars.**

PART 2 · APPLY IT

1. **A music app gives x points for each of 5 downloaded songs, and you earn 14 bonus profile points. You have 54 points altogether.** A music app gives x points for each of 5 downloaded songs, and you earn 14 bonus profile points. You have 54 points altogether.
2. **You earn x coins in each of 4 coding missions, then spend 13 coins to unlock a game feature. You have 39 coins left.** You earn x coins in each of 4 coding missions, then spend 13 coins to unlock a game feature. You have 39 coins left.

CHALLENGE

A player earns x coins in each of 12 levels and spends 15 coins on a game item, leaving 69 coins. Multiplication comes first because the player earns coins in all 12 levels before spending 15.

Accept any realistic situation that matches every number, operation, and equality in the equation. The unknown x may represent any appropriate equal amount, such as points, tickets, coins, or cost per item.