LESSON MAKER PRO

Equation Detectives

Turn words into one-step equations.

GRADE 6 · 6.PFA.3.e

6.PFA.3.e "Write a one-step linear equation in one variable to represent a verbal situation, including those in context."

NAME _____ DATE _____

MATCH THE RELATIONSHIP

Let x stand for the unknown amount. Use words such as plus, minus, times, shared equally, and is to choose operations and place an equal sign. Write an equation that shows the relationship in the situation.

WORKED EXAMPLE

A number minus 14 is 21. Write a one-step equation.

1. Let x represent the number.
2. "Minus 14" means x - 14.
3. "Is 21" means = 21.

Answer: x - 14 = 21

PRACTICE 6 problems

1 A number plus 9 equals 30. Write a one-step equation.

ANSWER _____

2 Forty-six is a number minus 12. Write a one-step equation.

ANSWER _____

3 A number times 7 is 56. Write a one-step equation.

ANSWER _____

4 A number split equally among 6 groups gives 11 in each group. Write a one-step equation.

ANSWER _____

5 Thirty-nine is 3 times a number. Write a one-step equation.

ANSWER _____

6 A number decreased by 16 equals 25. Write a one-step equation.

ANSWER _____

APPLY IT Show your work

1 Mia has x dollars. Her aunt gives her $13, and Mia then has exactly $28, the cost of a game she wants. Write a one-step equation.

WORK SPACE

ANSWER _____

2 Seven students each pay x dollars for a rental pass at a skating rink. Together, they pay $35. Write a one-step equation.

WORK SPACE

ANSWER _____

CHALLENGE One step up

A team scored 63 points. After x points were removed because of a scoring error, 9 points remained. Write two different one-step equations that represent the situation. Then explain why both equations work.

WORK SPACE AND ANSWER

ANSWER KEY

Equation Detectives

GRADE 6 · 6.PFA.3.e

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A number plus 9 equals 30. Write a one-step equation.	**x + 9 = 30**
2	Forty-six is a number minus 12. Write a one-step equation.	**x - 12 = 46**
3	A number times 7 is 56. Write a one-step equation.	**7x = 56**
4	A number split equally among 6 groups gives 11 in each group. Write a one-step equation.	**x / 6 = 11**
5	Thirty-nine is 3 times a number. Write a one-step equation.	**3x = 39**
6	A number decreased by 16 equals 25. Write a one-step equation.	**x - 16 = 25**

PART 2 · APPLY IT

1. **x + 13 = 28** Let x represent the money Mia had before her aunt gave her money. Add 13 to her starting amount to equal 28.
2. **7x = 35** Let x represent the cost of one rental pass. Seven equal pass costs total 35 dollars.

CHALLENGE

63 - x = 9 and x + 9 = 63. The first equation subtracts the removed points from the original score. The second equation shows that the removed points plus the remaining points equal the original score.

Accept equivalent equations with sides reversed or terms reordered, such as 30 = x + 9. For the challenge, accept both 63 - x = 9 and x + 9 = 63, as well as equivalent forms such as 9 = 63 - x.