LESSON MAKER PRO

Find the Unknown

Solve equations and check what the answers mean.

GRADE 6 · 6.A.3

6.A.3 "Use equations and inequalities to model and solve mathematical problems and use the idea of maintaining equality to solve equations. Interpret solutions in the original context. Model mathematical situations using expressions..."

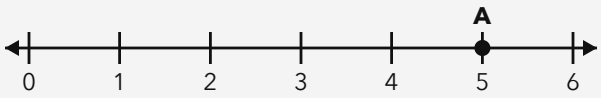
NAME _____ DATE _____

KEEP IT EQUAL

To solve x + p = q, subtract p from both sides. To solve px = q, divide both sides by p when p is not zero. Check your answer in the original equation.

WORKED EXAMPLE

The line shows a total at A. If x + 3/4 equals that total, find x.



1. A = 5, so x + 3/4 = 5.
2. Subtract 3/4 from both sides: x = 5 - 3/4.
3. x = 4 1/4. Check: 4 1/4 + 3/4 = 5.

Answer: x = 4 1/4

PRACTICE 4 problems

1 Solve x + 2/3 = 1 1/6.

ANSWER _____

2 Solve (4/5)x = 8.

ANSWER _____

3 Solve x + 1 1/3 = 3.

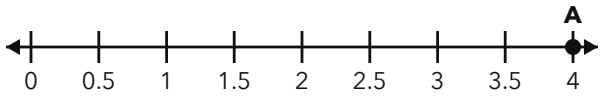
ANSWER _____

4 Solve (2/5)x = 1 1/5.

ANSWER _____

APPLY IT Show your work

1 The line shows your game goal at A. You have 1 1/2 points and need x more. Write and solve an equation, then mark x on the line.



ANSWER _____

2 Three batches of slime use A cups of glue in all. Each batch uses x cups. Write and solve an equation, then mark x on the line. Is the amount reasonable?



ANSWER _____

CHALLENGE One step up

Four game passes cost x dollars each. A $2 fee brings the total to $14. Write and solve an equation. Explain why the price makes sense.

WORK SPACE AND ANSWER

ANSWER KEY

Find the Unknown

GRADE 6 · 6.A.3

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Solve x + 2/3 = 1 1/6.	**x = 1/2**
2	Solve (4/5)x = 8.	**x = 10**
3	Solve x + 1 1/3 = 3.	**x = 1 2/3**
4	Solve (2/5)x = 1 1/5.	**x = 3**

PART 2 · APPLY IT

1. **1 1/2 + x = 4; x = 2 1/2 points. Mark 2 1/2.** Subtract 1 1/2 from the goal of 4. Check: 1 1/2 + 2 1/2 = 4.
2. **3x = 4 1/2; x = 1 1/2 cups. Mark 1 1/2. Yes, three batches use 4 1/2 cups.** Divide 4 1/2 by 3. The answer is reasonable because 3 × 1 1/2 = 4 1/2.

CHALLENGE

4x + 2 = 14, so x = $3. Four $3 passes cost $12, and the $2 fee brings the total to $14.

Accept equivalent fractions or decimals and correctly placed marks on the number lines. For the challenge, accept any explanation that checks the pass price against the total.