LESSON MAKER PRO

Equation Quest

Find the missing value in decimal and fraction equations.

GRADE 6 · MA.6.AR.2.4

MA.6.AR.2.4 "Determine the unknown decimal or fraction in an equation involving any of the four operations, relating three numbers, with the unknown in any position."

NAME _____ DATE _____

KEEP IT BALANCED

An equation is balanced, so do the same operation to both sides. Use an inverse operation to get x alone: subtract for addition, add for subtraction, divide for multiplication, and multiply for division. Check by putting your answer back into the equation.

WORKED EXAMPLE

Solve: 2.4 * x = 12

1. Divide both sides by 2.4.
2. x = 12 / 2.4
3. x = 5

Answer: x = 5

PRACTICE 6 problems

1 Solve: x + 3/8 = 7/8

ANSWER _____

2 Solve: 9.6 - x = 4.1

ANSWER _____

3 Solve: x - 1.25 = 2.6

ANSWER _____

4 Solve: (3/5) * x = 9/10

ANSWER _____

5 Solve: x / 0.4 = 7.5

ANSWER _____

6 Solve: 8.4 / x = 2.1

ANSWER _____

APPLY IT Show your work

1 You have x dollars in your game account. After adding $2.35, your balance is $6.75. How many dollars were in the account at first?

WORK SPACE

ANSWER _____

2 A 21.6-kilometer biking route is split into x equal stages. Each stage is 2.7 kilometers long. How many stages are there?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Solve: (7/9) / x = 14/27

WORK SPACE AND ANSWER

ANSWER KEY

Equation Quest

GRADE 6 · MA.6.AR.2.4

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Solve: x + 3/8 = 7/8	**x = 1/2**
2	Solve: 9.6 - x = 4.1	**x = 5.5**
3	Solve: x - 1.25 = 2.6	**x = 3.85**
4	Solve: (3/5) * x = 9/10	**x = 3/2**
5	Solve: x / 0.4 = 7.5	**x=3**
6	Solve: 8.4 / x = 2.1	**x=4**

PART 2 · APPLY IT

1. **x = 4.40 dollars** Write x + 2.35 = 6.75. Subtract 2.35 from both sides to get x = 4.40.
2. **x = 8 stages** Write 21.6 / x = 2.7. Divide 21.6 by 2.7 to get x = 8.

CHALLENGE

x = 3/2

Accept equivalent fraction and decimal forms when they are exact, such as 1/2 or 0.5 and 3/2 or 1.5. For the money problem, accept $4.40 or $4.4.