

Equation Power-Up

Use multiplication and division to find x.

GRADE 6 • MA.6.AR.2.3

MA.6.AR.2.3 "Write and solve one-step equations in one variable within a mathematical or real-world context using multiplication and division, where all terms and solutions are integers."

NAME _____

DATE _____

UNDO TO SOLVE

In a multiplication equation, divide both sides by the number multiplied by x. In a division equation, multiply both sides by the number under x to isolate x.

WORKED EXAMPLE

Solve $9x = 72$.

1. Start with $9x = 72$.
2. Divide both sides by 9.
3. $x = 8$.
4. Check: $9(8) = 72$.

Answer: $x = 8$

PRACTICE 6 problems

1 Solve: $x / 4 = 7$

ANSWER _____

2 Solve: $5x = 35$

ANSWER _____

3 Solve: $63 = 3x$

ANSWER _____

4 Solve: $x / 6 = 11$

ANSWER _____

5 Solve: $12x = 84$

ANSWER _____

6 Solve: $x / 14 = 5$

ANSWER _____

APPLY IT Show your work

- 1** A game club packs 42 trading cards into 6 equal prize bundles. Each bundle has x cards. Write and solve an equation to find x .

WORK SPACE

ANSWER _____

- 2** Five teams each pay the same fee to join an esports event. The event collects \$60 total. Let x be the fee for one team. Write and solve an equation to find x .

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A player earns 91 tournament points over 7 equal winning rounds. The player also earned 15 practice points, but those are not part of the tournament total. Let x be the points earned in each winning round. Write and solve an equation. Explain why you did or did not use 15.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Solve: $x / 4 = 7$	$x = 28$
2	Solve: $5x = 35$	$x = 7$
3	Solve: $63 = 3x$	$x = 21$
4	Solve: $x / 6 = 11$	$x = 66$
5	Solve: $12x = 84$	$x = 7$
6	Solve: $x / 14 = 5$	$x = 70$

PART 2 • APPLY IT

- $6x = 42$; $x = 7$ cards** Use $6x = 42$ because there are 6 equal bundles. Divide 42 by 6 to find that each bundle has 7 cards.
- $5x = 60$; $x = \$12$** Use $5x = 60$ because 5 equal team fees make the total. Divide 60 by 5 to find the fee is \$12.

CHALLENGE

$7x = 91$; $x = 13$. Do not use 15 because the practice points are not part of the tournament total.

Accept equivalent equation forms, such as $42 = 6x$ or $60 = 5x$. For word problems, accept answers with correct units and a correct one-step multiplication equation.