LESSON MAKER PRO

Ratio Route

Solve proportions with a strategy that makes sense to you.

GRADE 6 · 6.NR.4.3

6.NR.4.3 "Solve problems involving proportions using a variety of student-selected strategies."

NAME _____ DATE _____

THE BIG IDEA

A ratio compares two quantities. A proportion says that two ratios are equivalent. You can solve a proportion by scaling both parts, making equivalent fractions, or cross multiplying, then check that both ratios have the same value.

WORKED EXAMPLE

Solve $3/5 = 12/x$.

1. $3x = 5 \times 12$
2. $3x = 60$
3. $x = 20$

Answer: x = 20

PRACTICE 6 problems

1 Solve 2/7 = x/21.

ANSWER _____

2 Solve x/8 = 14/56.

ANSWER _____

3 Solve 4/9 = 28/x.

ANSWER _____

4 Solve 18/24 = x/32.

ANSWER _____

5 Solve 6/11 = x/33.

ANSWER _____

6 Solve 14/49 = x/56.

ANSWER _____

APPLY IT Show your work

1 A game store sells 8 trading-card sleeves for $6. At the same rate, how much will 28 sleeves cost?

WORK SPACE

ANSWER _____

2 A coding club's robot completes 8 test loops in 2 minutes. At the same rate, how long will it take to complete 26 test loops?

WORK SPACE

ANSWER _____

CHALLENGE One step up

The art club uses 16 blue beads for every 24 yellow beads. For a design with 38 blue beads, how many yellow beads are needed? Explain your reasoning.

WORK SPACE AND ANSWER

ANSWER KEY # Ratio Route

GRADE 6 · 6.NR.4.3

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Solve 2/7 = x/21.	**x=6**
2	Solve x/8 = 14/56.	**x=2**
3	Solve 4/9 = 28/x.	**x = 63**
4	Solve 18/24 = x/32.	**x = 24**
5	Solve 6/11 = x/33.	**x = 18**
6	Solve 14/49 = x/56.	**x = 16**

PART 2 · APPLY IT

1. **$21** Set up 8/6 = 28/x. Cross multiply to get 8x = 168, so x = 21.
2. **6 1/2 minutes** Set up 8/2 = 26/x. Cross multiply to get 8x = 52, so x = 13/2, or 6 1/2 minutes.

CHALLENGE

57 yellow beads.

Accept any correct strategy, including scaling, equivalent fractions, or cross multiplication. For the robot problem, accept 6 1/2 minutes or 13/2 minutes, and require the challenge explanation to show proportional reasoning.