Simplify to Find Equivalent Ratios

NAME:

Math PATHWAYS & PITFALLS

Purpose

To simplify to find the missing number that makes equivalent ratios

Math Words

equivalent The ratios $\frac{60}{100}$ and $\frac{3}{5}$ are equivalent because they both have 3 for every 5.

form of 1 100 over 100, $\frac{8}{8}$, and $\frac{5}{5}$ are all equivalent forms of the number 1.

simplify I can simplify $\frac{36}{81}$ by dividing the numerator and denominator both by 9 to get $\frac{4}{9}$.

Starter Problem

Think about the meaning. Solve.

$$\frac{15}{60} = \frac{3}{n}$$

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Starter Problem

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Student Thinking

Alexis

The ratios are equal, so they simplify to the same fraction. 15 over 60 simplifies to $\frac{1}{4}$ and I know $\frac{3}{12}$ is also equal to $\frac{1}{4}$. So, the missing number n is equal to 12.

OK

$\frac{15}{60} = \boxed{\frac{1}{4}} = \frac{3}{12}$

Ramona

I know 5 times 3 is 15. So, 5 times 60 is 300. $n = 300$.

Pitfall

15 x5 3
60 x5 n

Things to Remember

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NAME:

Our Turn

Find the the missing number to make equal ratios.

1. $\frac{4}{n} = \frac{28}{35}$ $n =$ _____

2. $\frac{15}{20} = \frac{n}{24}$ $n =$ _____

3. $\frac{36}{30} = \frac{24}{n}$ $n =$ _____

NAME:

My Turn

Find the the missing number to make equal ratios.

1. $\frac{4}{n} = \frac{8}{18}$ $n =$ _____

2. $\frac{30}{100} = \frac{n}{60}$ $n =$ _____

3. $\frac{20}{8} = \frac{15}{n}$ $n =$ _____

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Multiple Choice Mini Lesson

Fill in the circle next to the answer you choose.

1. $\frac{18}{30} = \frac{12}{n}$

○ 6 ○ 45 ○ 20 ○ 24

2. $\frac{n}{6} = \frac{15}{10}$

○ 3 ○ 5 ○ 6 ○ 9

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NAME:

Writing Task Mini Lesson

Explain how you know $n = 20$ is the solution to Problem B and not to Problem A.

A. $\frac{17}{40} = \frac{21}{n}$ B. $\frac{42}{24} = \frac{35}{n}$

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