

Revision Layer: Cumulative Connection

Name: _____ **Class:** _____ **Date:** _____

Use these short retrieval items before beginning the new work. Show a representation when it helps, keep units visible, and explain one answer to a partner.

1. Solve $\frac{1}{2} = \frac{x}{20}$ using a scale factor.

2. Solve $\frac{1}{2} = \frac{12}{y}$ and state the unknown.

3. Explain when cross multiplication is efficient but not explanatory by itself.

4. Check a proportion with an estimate or equivalent ratio.

Revision Layer: Strategy Studio

These tasks deliberately vary the numbers, representation, unknown, or context. Do not choose a method from the chapter title alone.

1. Solve $\frac{1}{2} = x/20$ with a ratio table, a unit rate, and an equation. Compare the strengths of the methods.

2. Decide whether $\frac{1}{2} = \frac{3}{6}$ is true without cross multiplication first.

3. A student writes $\frac{1}{2} = 8/x$ and concludes $x = 12$ by multiplying only one side. Diagnose the missing relationship.

4. Create a proportion whose solution is a fraction between 2 and 3, then solve it using a representation before using symbols.

Transfer Bridge: Familiar, Altered, Non-Routine, and Repair

Use this section after the worked examples and before the exit ticket. The method is deliberately not named in every task. First identify the relationship or action, then represent, solve, and check.

A. Familiar structure

Solve $= x/20$ using a ratio table or scale factor.

B. Altered structure

Solve $= 8/x$ using a representation before using cross multiplication.

C. Non-routine structure

Solve $=$ without cross multiplication first, then explain which method is most efficient and which makes the relationship clearest.

D. Repair and compare

A student cross-multiplies automatically but cannot explain the relationship. Add a sentence that connects cross-products to equivalent ratios.
