

Revision Layer: Cumulative Connection

Name: _____ Grade: _____ Date: _____

Use these short retrieval items near the end of the chapter or at the start of the next lesson. Mix current learning with earlier ideas. Show a representation when it helps, keep units visible, and explain one answer to a partner.

1. Convert 40% to a decimal and a simplified fraction. Explain what the whole represents.

2. Find 40% of 30 and label the part, whole, and percent.

3. If 12 is 40% of a whole, reconstruct the whole using both a benchmark argument and division.

4. Explain how the inverse reasoning used in fraction division helps make sense of dividing by a decimal percent.

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. Use the same three numbers to solve three structures: 30% of 60; 18 is 30% of what number; 18 is what percent of 60. Explain why the operation changes.

2. Solve 18 is 30% of what number with a percent bar, an equation, and a benchmark argument. Compare what each representation makes visible.

3. Write one missing-part, one missing-whole, and one missing-percent problem using the same numerical relationship.

4. A student divides by 30 instead of 0.30. Diagnose the error using both units and a magnitude check.

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

First identify the relationship or action, then represent, solve, and check. The method is deliberately not named.

A. Familiar structure

Find 30% of 60, and name the part, whole, and percent.

B. Altered structure

Solve each form with the same numbers: 30% of 60; 18 is 30% of what number; 18 is what percent of 60.

C. Non-routine structure

A tank contains 18 litres, which is 30% of its capacity. Find the capacity, then write a part-unknown version with the same numbers.

D. Repair and compare

A student divides 18 by 30 and writes 0.6%. Diagnose the error by naming the percent as a decimal and checking the size of the answer.
