Rates and Percents

Lesson 9 Percent Parts in Context

Standards 6.RP.A.3c

Learning target I can find the part when I know the percent and whole.

Materials Ratio tables, price labels, pencils, optional double number lines.

Lesson Flow 50 Minutes

0–5 Activate prior knowledge. Read the learning target. Ask students what they already know about percent parts in context. Use a quick model or estimate to make their starting ideas visible.

5–17 Teach and model. Use part = (percent/100) × whole. You may also find 10%, 5%, or 1% and combine equal pieces. Label the part in the same units as the whole. Work through the two examples on the attached instruction page. Have students name the first step before showing it.

17–22 Guided practice. Revisit worked Example 2 with its solution covered. Students propose the next step and explain why it is valid; uncover and compare with the worked solution.

22–45 Independent classwork. Assign the attached 10 questions in order. Check items 1–3 for entry-level understanding, 4–6 for connected procedures, 7–8 for representation and explanation, and 9–10 for application or justification. Ask students to use the instruction-page notes area or extra grids for longer work.

45–50 Check understanding. Use classwork question 10 as an exit discussion: Find 25% of 220. Then explain a mental-math or fraction strategy that checks your answer. Compare the result with the answer key and ask a student to defend the method.

Support and Extension

Support Model item 1 together with the listed tools, then have students attempt item 2 independently. Watch rate units, reference wholes, and confusing percent with its decimal form.

Extension Ask students to solve a final item another way, draw a second representation, or create a related problem with a checked answer.

Next step Record which students can explain the target independently. Begin the next teaching session with a brief correction for any recurring error.

Name _____ Date _____

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Learn and Discuss

Use part = (percent/100) × whole. You may also find 10%, 5%, or 1% and combine equal pieces. Label the part in the same units as the whole.

Example 1 Find 25% of 60.
Solution 15. 25/100 × 60 = 15.
Example 2 Find 20% of 80. Then explain a mental-math or fraction strategy that checks your answer.
Solution 16. 20/100 × 80 = 16.

Classwork Show Your Work

Complete the 10 problems on the following page. Refer to the examples, draw models, and check your results.

My Notes or Second Method

Lesson 9 Percent Parts in Context

Name _____ Show calculations, models, and units.

1. Find 20% of 120.

2. Find 20% of 160.

3. Find 20% of 100.

4. Find 60% of 140.

5. Find 40% of 40.

6. Find 5% of 100.

7. Find 20% of 240. Then explain a mental-math or fraction strategy that checks your answer.

8. Find 75% of 200. Then explain a mental-math or fraction strategy that checks your answer.

9. Find 20% of 120. Then explain a mental-math or fraction strategy that checks your answer.

10. Find 25% of 220. Then explain a mental-math or fraction strategy that checks your answer.

Percent Parts in Context

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1. 24
Reasoning 20/100 × 120 = 24.

2. 32
Reasoning 20/100 × 160 = 32.

3. 20
Reasoning 20/100 × 100 = 20.

4. 84
Reasoning 60/100 × 140 = 84.

5. 16
Reasoning 40/100 × 40 = 16.

6. 5
Reasoning 5/100 × 100 = 5.

7. 48
Reasoning 20/100 × 240 = 48.

8. 150
Reasoning 75/100 × 200 = 150.

9. 24
Reasoning 20/100 × 120 = 24.

10. 55
Reasoning 25/100 × 220 = 55.