LESSON MAKER PRO

Ratio Form Switch

Show one amount in several useful forms.

GRADE 6 · TEKS 6.4.E

6.4.E "represent ratios and percents with concrete models, fractions, and decimals;"

NAME _____ DATE _____

SWITCH THE FORM

A percent names a number of parts out of 100. To change a percent to a fraction, write it over 100 and simplify, then move the decimal point two places left to write a decimal. A part-to-whole ratio can be written as a fraction, then changed to a decimal and a percent.

WORKED EXAMPLE

Write 35% as a fraction in simplest form and as a decimal.

1. 35% means 35/100.
2. Divide the numerator and denominator by 5: 35/100 = 7/20.
3. Move the decimal point two places left: 35% = 0.35.

Answer: 7/20 and 0.35

PRACTICE 6 problems

1 Write 18% as a fraction in simplest form and as a decimal.

ANSWER _____

2 Write 0.64 as a percent and as a fraction in simplest form.

ANSWER _____

3 The ratio of raisins to all trail mix pieces is 3:5. Write the ratio as a fraction, a decimal, and a percent.

ANSWER _____

4 A bar has 42 of its 50 equal parts shaded. Write the shaded part as a fraction in simplest form, a decimal, and a percent.

ANSWER _____

5 A ribbon is split into 25 equal sections. Three sections are green. Write the green part as a fraction, a decimal, and a percent.

ANSWER _____

6 Write 0.125 as a fraction in simplest form and as a percent.

ANSWER _____

APPLY IT Show your work

1 For a lunch survey, 21 of 30 students choose to have music playing in the cafeteria. Write the part-to-whole comparison as a simplified ratio, fraction, decimal, and percent.

WORK SPACE

ANSWER _____

2 At a game club, 9 of 24 students choose puzzle games as their favorite type. Write the part-to-whole comparison as a simplified ratio, fraction, decimal, and percent.

WORK SPACE

ANSWER _____

3 Use 20 teacher-supplied counters of equal value as one whole set. Mark or turn over 7 of them. Actually arrange and count the marked part and the whole. On separate paper draw your arrangement and write the marked part as a part-to-whole ratio, fraction, decimal and percent. Explain how the same concrete set represents each form.

WORK SPACE

ANSWER _____

CHALLENGE One step up

A school library says that 45% of its 80 new books are graphic novels. How many graphic novels are there? Also write 45% as a fraction in simplest form and as a decimal.

WORK SPACE AND ANSWER

ANSWER KEY

Ratio Form Switch

GRADE 6 · TEKS 6.4.E

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Write 18% as a fraction in simplest form and as a decimal.	**9/50 and 0.18**
2	Write 0.64 as a percent and as a fraction in simplest form.	**64% and 16/25**
3	The ratio of raisins to all trail mix pieces is 3:5. Write the ratio as a fraction, a decimal, and a percent.	**3/5, 0.6, and 60%**
4	A bar has 42 of its 50 equal parts shaded. Write the shaded part as a fraction in simplest form, a decimal, and a percent.	**21/25, 0.84, and 84%**
5	A ribbon is split into 25 equal sections. Three sections are green. Write the green part as a fraction, a decimal, and a percent.	**3/25, 0.12, and 12%**
6	Write 0.125 as a fraction in simplest form and as a percent.	**1/8 and 12.5%**

PART 2 · APPLY IT

1. **7:10, 7/10, 0.7, and 70%** Simplify 21/30 by dividing both numbers by 3 to get 7/10. Then write 7/10 as 0.7 and 70%.
2. **3:8, 3/8, 0.375, and 37.5%** Simplify 9/24 by dividing both numbers by 3 to get 3/8. Divide 3 by 8 to get 0.375, then multiply by 100 for 37.5%.
3. **7:20, 7/20, 0.35 and 35%.** Observe 20 total counters with exactly 7 marked. Require a matching learner drawing and the connection 7/20 = 35/100 = 0.35 = 35%; count the whole consistently. Teacher: supply counters or equal precut paper pieces before this task.

CHALLENGE

36 graphic novels; 9/20; 0.45

Require simplified fractions and ratios when the prompt asks for them. Accept equivalent decimal notation with or without a leading zero.