

Tenths and Hundredths

Model, rename, compare, and add.

GRADE 4 • 4.NR.5

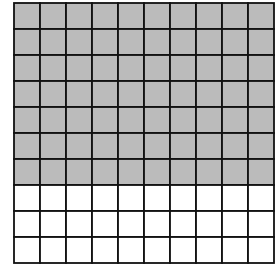
4.NR.5 "Solve real-life problems involving addition, equivalence, comparison of fractions with denominators of 10 and 100, and comparison of decimal numbers as tenths and hundredths using part-whole strategies and visual models."

NAME _____

DATE _____

THE BIG IDEA

Each 10-by-10 grid represents one whole. A row is $\frac{1}{10}$; a small square is $\frac{1}{100}$. Multiply both numerator and denominator by 10 to rename tenths: $\frac{4}{10} = \frac{40}{100} = 0.40$. Use equal-sized wholes when comparing.



WORKED EXAMPLE

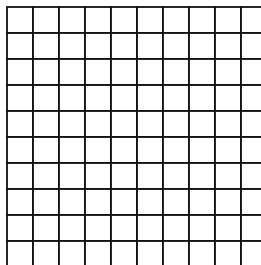
A team completes $\frac{4}{10}$ of a project, then another $\frac{3}{10}$. What part is complete? The grid shows the total.

1. Rename: $\frac{4}{10} = \frac{40}{100}$ and $\frac{3}{10} = \frac{30}{100}$.
2. Add: $\frac{40}{100} + \frac{30}{100} = \frac{70}{100}$.

Answer: $\frac{70}{100} = \frac{7}{10} = 0.70$ of the project.

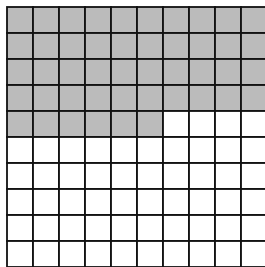
PRACTICE 4 problems

- 1** Shade $\frac{6}{10}$ of this whole. Write an equivalent fraction with denominator 100 and its decimal.



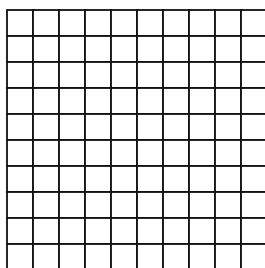
ANSWER _____

- 2 The grid shows 46 hundredths. Write its fraction and decimal. How many more hundredths make $\frac{5}{10}$?



ANSWER _____

- 3 Compare 0.58 and $\frac{6}{10}$ using $<$, $>$, or $=$. On the grid, shade 58 squares and outline the region for $\frac{6}{10}$. Explain.



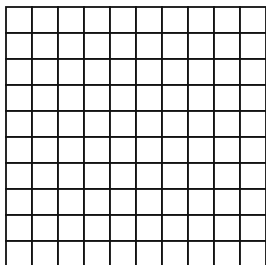
ANSWER _____

- 4 Order $\frac{8}{10}$, $\frac{69}{100}$, and 0.71 from least to greatest. Rename them as hundredths to justify your order.

ANSWER _____

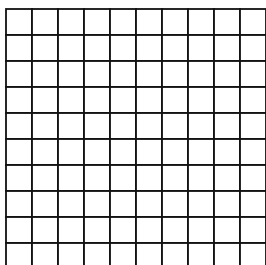
APPLY IT Show your work

- 1** Jalen completes 0.45 of a coding challenge. Noor completes $\frac{6}{10}$ of the same challenge. Who completes more, and how much more? Shade Jalen's amount; outline Noor's amount on this same-whole grid.



ANSWER _____

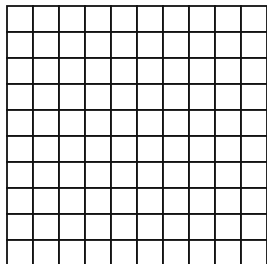
- 2** Students complete $\frac{37}{100}$ of a reading goal on Monday and another $\frac{6}{10}$ on Tuesday. Shade Monday's part, then mark Tuesday's part with Xs in different squares. What part is complete? Write a fraction and decimal.



ANSWER _____

CHALLENGE One step up

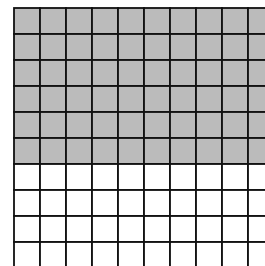
Two friends compare 0.8 and 0.79. One says 0.79 is greater because 79 is greater than 8. Use the grid and equivalent hundredths to explain the error.



WORK SPACE AND ANSWER

PRACTICE 1

$60/100 = 0.60$ (or 0.6); 60 squares shaded.

**PRACTICE 2**

$46/100 = 0.46$; 4 more hundredths make $50/100 = 5/10$.

PRACTICE 3

$0.58 < 6/10$ because $58/100 < 60/100$; $6/10$ is $2/100$ larger.

PRACTICE 4

$69/100, 0.71, 8/10$; $69/100 < 71/100 < 80/100$.

APPLY IT 1

Noor completes $15/100 = 0.15$ more of the challenge.
 $6/10 = 60/100$ and $0.45 = 45/100$; $60/100 - 45/100 = 15/100$.

APPLY IT 2

$97/100 = 0.97$ of the goal is complete.
 $6/10 = 60/100$. Use 37 shaded squares and 60 different squares with Xs, leaving 3 empty: $37/100 + 60/100 = 97/100$.

CHALLENGE

$0.8 = 80/100$ and $0.79 = 79/100$, so 0.8 is greater by $1/100$. The digits count different-sized parts.

Every grid is one whole with 100 equal squares. Accept equivalent decimals and valid shading arrangements. For comparisons, students may shade the smaller amount and outline the larger region on the same grid. Task 3 needs regions of 58 and 60 squares; the challenge needs regions of 79 and 80 squares.