

Decimal Fraction Match

Connect thirds, eighths, and hundredths to decimals.

GRADE 5 • 5.NS.1.c

5.NS.1.c "Identify equivalent relationships between decimals and fractions with denominators that are thirds, eighths, and factors of 100 in their equivalent decimal form, with and without models.*"

NAME _____

DATE _____

MATCH THE FORMS

To write a fraction with denominator 8 as a decimal, divide the numerator by 8. A non-whole-number fraction with denominator 3 has a repeating decimal, as $1/3 = 0.333...$, but a fraction that makes a whole number does not repeat. A fraction with denominator 100 shows hundredths, so write its digits in the tenths and hundredths places.

WORKED EXAMPLE

Write $5/8$ as a decimal.

1. Write 5.000 and divide by 8.
2. 50 tenths divided by 8 is 6 tenths, with 2 tenths left.
3. 20 hundredths divided by 8 is 2 hundredths, then 40 thousandths divided by 8 is 5 thousandths.

Answer: 0.625

PRACTICE 6 problems

1 Write $1/8$ as a decimal.

ANSWER _____

2 Write $7/8$ as a decimal.

ANSWER _____

3 A 10 by 10 grid has 36 shaded small squares. Write the shaded part as a decimal and as a fraction with denominator 100.

ANSWER _____

4 Write 0.20 as a fraction with denominator 100.

ANSWER _____

5 Write $2/3$ as a decimal.

ANSWER _____

6 Which pair names the same amount? A. $4/8$ and 0.5 B. $3/8$ and 0.5

ANSWER _____

APPLY IT Show your work

- 1** Rina has listened to $\frac{6}{8}$ of a podcast episode for her fan club. Her app shows progress as a decimal. What decimal should the app show?

WORK SPACE

ANSWER _____

- 2** In an online building game, Mateo fills $\frac{2}{3}$ of a storage meter. Write the filled amount as a decimal.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Use decimals to put these amounts in order from least to greatest: $\frac{3}{8}$, $\frac{2}{3}$, 0.75. Explain your reasoning.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Write $\frac{1}{8}$ as a decimal.	0.125
2	Write $\frac{7}{8}$ as a decimal.	0.875
3	A 10 by 10 grid has 36 shaded small squares. Write the shaded part as a decimal and as a fraction with denominator 100.	0.36 and $\frac{36}{100}$
4	Write 0.20 as a fraction with denominator 100.	$\frac{20}{100}$
5	Write $\frac{2}{3}$ as a decimal.	0.666...
6	Which pair names the same amount? A. $\frac{4}{8}$ and 0.5 B. $\frac{3}{8}$ and 0.5	A. $\frac{4}{8}$ and 0.5

PART 2 • APPLY IT

1. **0.75** Divide 6 by 8. The decimal equivalent of $\frac{6}{8}$ is 0.75.
2. **0.666...** Divide 2 by 3. The digit 6 repeats, so the decimal is 0.666...

CHALLENGE

$\frac{3}{8} < \frac{2}{3} < 0.75$, because $\frac{3}{8} = 0.375$ and $\frac{2}{3} = 0.666...$, and $0.375 < 0.666... < 0.75$.

Accept trailing zeros in terminating decimals, such as 0.750 for 0.75. For any item that specifically asks for a fraction with denominator 100, require a denominator of 100.