LESSON MAKER PRO

Fraction Decimal Detectives

Read models, write decimals, and explain your thinking.

GRADE 5 · 5.NS.1.a

5.NS.1.a "Use concrete and pictorial models to represent fractions with denominators that are thirds, eighths, and factors of 100 in their equivalent decimal form.*"

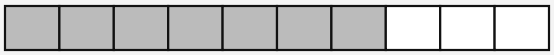
NAME _____ DATE _____

SEE THE DECIMAL

A fraction with a denominator that divides 100 can be renamed as hundredths, then written as a decimal. For eighths, divide the numerator by 8. For thirds, the decimal repeats.

WORKED EXAMPLE

Write the decimal shown by the model.

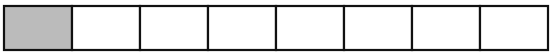


1. The model shows 7/10.
2. Rename tenths as hundredths: 7/10 = 70/100.
3. Write 70 hundredths as 0.70, which is the same as 0.7.

Answer: 0.7

PRACTICE 6 problems

1 Write the decimal shown by the model.



ANSWER _____

2 Write the decimal shown by the model.



ANSWER _____

3 Write 9/25 as a decimal.

ANSWER _____

4 Write 0.48 as a fraction with a denominator of 100.

ANSWER _____

5 Write 5/8 as a decimal.

ANSWER _____

6 Write 0.04 as a fraction with a denominator of 100.

ANSWER _____

APPLY IT Show your work

1 Ava has completed the part of a game event shown by the model. What decimal part of the event has she completed?



ANSWER _____

2 Kai spent 1/3 of an hour practicing a dance routine. Write the part of an hour as a decimal.

WORK SPACE

ANSWER _____

3 Build and draw: Your teacher provides eight identical rectangular fraction pieces and a whole-strip template exactly eight piece widths long. Place all eight pieces edge to edge on the template to show one whole. Keep five pieces in place and remove three to show 5/8. Show your actual arrangement to your teacher. Draw a matching bar divided into eight equal parts and shade five. Write the equivalent decimal and explain how the pieces and picture match.

WORK SPACE

ANSWER _____

CHALLENGE One step up

Which is greater, 7/8 or 0.86? Explain by writing 7/8 as a decimal.

WORK SPACE AND ANSWER

ANSWER KEY

Fraction Decimal Detectives

GRADE 5 · 5.NS.1.a

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Write the decimal shown by the model.	**0.125**
2	Write the decimal shown by the model.	**0.666...**
3	Write 9/25 as a decimal.	**0.36**
4	Write 0.48 as a fraction with a denominator of 100.	**48/100**
5	Write 5/8 as a decimal.	**0.625**
6	Write 0.04 as a fraction with a denominator of 100.	**4/100**

PART 2 · APPLY IT

1. **0.75** The model shows 3/4. Rename 3/4 as 75/100, then write 0.75.
2. **0.333...** Divide 1 by 3. The digit 3 repeats, so the decimal is 0.333...
3. **Five of eight equal pieces represent 5/8 = 0.625; the matching drawing has eight equal parts with five shaded.** Observe actual use of the physical pieces against the whole template. Check no gaps or overlaps, five pieces remaining, a matching eight-part drawing and 5 divided by 8 = 0.625. A written description without manipulating pieces is incomplete.

CHALLENGE

7/8 is greater. 7/8 = 0.875, and 0.875 > 0.860.

Accept equivalent decimal forms with extra ending zeros, such as 0.70 for 0.7. For thirds, accept a correctly marked repeating decimal, such as 0.6 repeating or 0.3 repeating. Apply 3 requires actual physical fraction-piece use and a matching learner drawing. Teacher supplies identical eighth pieces and the corresponding whole template; assess both before accepting the decimal.

Apply 3: matching picture for the five concrete eighth pieces; 5/8 = 0.625.

5/8 = 0.625 