LESSON MAKER PRO

Benchmark Fraction Detective

Use 0, 1/2, and 1 to compare fractions.

GRADE 3 · 3.NS.3.e

3.NS.3.e "Compare a fraction, less than or equal to one, to the benchmarks of 0, 1/2, and 1 using area/region models, length models, and without models."

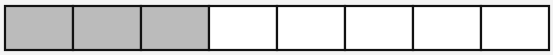
NAME _____ DATE _____

USE BENCHMARK FRACTIONS

Benchmarks are 0, 1/2, and 1. A fraction with about half its equal parts shaded is near 1/2. A fraction with only a few parts shaded is near 0, and a fraction with nearly all parts shaded is near 1.

WORKED EXAMPLE

Look at the fraction bar. Which benchmark is the shaded fraction closer to, 0 or 1/2?

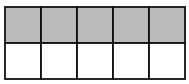


1. Count 8 equal parts.
2. See that 3 parts are shaded, so the fraction is 3/8.
3. Half of 8 is 4, so 1/2 = 4/8.
4. 3/8 is only 1/8 below 1/2.

Answer: 3/8 is closer to 1/2.

PRACTICE 6 problems

1 Look at the shaded array. Compare the shaded fraction to 1/2. Write <, >, or =.



ANSWER _____

2 Look at the fraction bar. Compare the shaded fraction to 1/2. Write <, >, or =.



ANSWER _____

3 Compare 1/5 to 1/2. Write <, >, or =.

ANSWER _____

4 Compare 7/10 to 1/2. Write <, >, or =.

ANSWER _____

5 Is 1/10 closer to 0 or 1/2?

ANSWER _____

6 Is 9/10 closer to 1/2 or 1?

ANSWER _____

APPLY IT Show your work

1 Jordan has finished 4/5 of a comic book. Is the part finished closer to 1/2 or 1? Write the benchmark.

WORK SPACE

ANSWER _____

2 A garden club planted flowers in 2/5 of the school garden. Compare 2/5 to 1/2. Write <, >, or =.

WORK SPACE

ANSWER _____

CHALLENGE One step up

Nora says that 3/8 is closer to 0 because 3 is less than 8. Is Nora correct? Explain your reasoning.

WORK SPACE AND ANSWER

ANSWER KEY

Benchmark Fraction Detective

GRADE 3 · 3.NS.3.e

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Look at the shaded array. Compare the shaded fraction to 1/2. Write <, >, or =.	**5/10 = 1/2**
2	Look at the fraction bar. Compare the shaded fraction to 1/2. Write <, >, or =.	**5/6 > 1/2**
3	Compare 1/5 to 1/2. Write <, >, or =.	**1/5 < 1/2**
4	Compare 7/10 to 1/2. Write <, >, or =.	**7/10 > 1/2**
5	Is 1/10 closer to 0 or 1/2?	**0**
6	Is 9/10 closer to 1/2 or 1?	**1**

PART 2 · APPLY IT

1. **1** 4/5 is 1/5 away from 1. It is farther from 1/2, so it is closer to 1.
2. **2/5 < 1/2** Two of 5 equal parts is less than half of the parts. Therefore, 2/5 is less than 1/2.

CHALLENGE

No. 4/8 is 1/2, and 3/8 is only 1/8 below 1/2 but 3/8 above 0, so 3/8 is closer to 1/2.

Accept equivalent fraction statements, such as 5/10 = 1/2. For the challenge, accept explanations comparing the distances: 3/8 is one eighth below 1/2 and three eighths above 0.