Equivalence of Fractions

Explore ideas and representations

Name _____ **Date** _____ **Score** _____ / 6

QUICK REVIEW

Equivalent fractions name the same number. Split every fifth in two to see $\frac{1}{5} = \frac{2}{10}$. The amount shaded stays the same when the whole is the same size. On aligned number lines, equivalent fractions land at the same distance from 0.

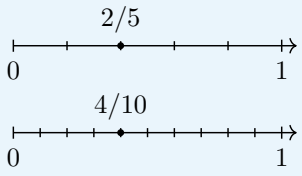
Worked example

Mark $\frac{2}{5}$ on the top line and $\frac{4}{10}$ on the bottom. Are they the same number?

1. 5-ths split into 2 equal smaller steps, making 10-ths.

2. The top endpoint after 2 steps matches the bottom endpoint after $2 \times 2 = 4$ steps.

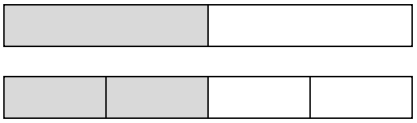
Answer: Yes; $\frac{2}{5} = \frac{4}{10}$.



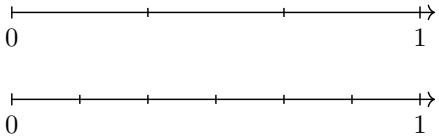
Practice Problems

Show your thinking.

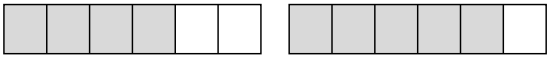
1. The strips are the same size. Name both shaded fractions and decide whether they are equivalent.



2. Mark $\frac{1}{3}$ on the top line and $\frac{2}{6}$ on the bottom. Are they the same number?

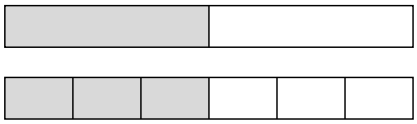


3. Compare $\frac{2}{3}$ and $\frac{5}{6}$ using $<, =$, or $>$. Use 6-ths.

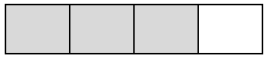


4. Fill the numerator: $\frac{1}{4} = \frac{\square}{8}$. Explain the piece counts.

5. The strips are the same size. Name both shaded fractions and decide whether they are equivalent.



6. A student claims $\frac{3}{4} = \frac{7}{8}$. Use 8 equal parts to correct the numerator.



Answer Key

1. $\frac{1}{2} = \frac{2}{4}$.
2. Yes; $\frac{1}{3} = \frac{2}{6}$.
3. $\frac{2}{3} < \frac{5}{6}$.
4. The numerator is 2.
5. $\frac{1}{2} = \frac{3}{6}$.
6. $\frac{3}{4} = \frac{6}{8}$, not $\frac{7}{8}$.

Step-by-Step Solutions

Follow each calculation, then check your own work.

Problem 1

1. Top: 1 of 2 equal pieces are shaded, or $\frac{1}{2}$. Bottom: 2 of 4, or $\frac{2}{4}$.
2. Each top piece splits into 2 bottom pieces: $1 \times 2 = 2$ and $2 \times 2 = 4$. The shaded lengths match.

Problem 2

1. 3-ths split into 2 equal smaller steps, making 6-ths.
2. The top endpoint after 1 steps matches the bottom endpoint after $1 \times 2 = 2$ steps.

Problem 3

1. Split each original piece into 2: $\frac{2}{3} = \frac{4}{6}$.
2. $4 < 5$ equal-sized pieces, so $\frac{4}{6} < \frac{5}{6}$.

Problem 4

1. $4 \times 2 = 8$, so each original piece has been split into 2 pieces.
2. The shaded count becomes $1 \times 2 = 2$, giving $\frac{2}{8}$.

Problem 5

1. Top: 1 of 2 equal pieces are shaded, or $\frac{1}{2}$. Bottom: 3 of 6, or $\frac{3}{6}$.
2. Each top piece splits into 3 bottom pieces: $1 \times 3 = 3$ and $2 \times 3 = 6$. The shaded lengths match.

Problem 6

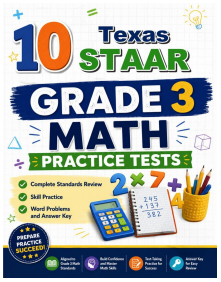
1. Split each of 4 pieces into 2 parts; all $4 \times 2 = 8$ smaller parts cover the whole.
2. The shaded count must also multiply: $3 \times 2 = 6$, not 7.

TESTINAR

Keep Building Grade 3 Math Skills

Choose the practice book matched to your state assessment and turn worksheet practice into a complete test-prep plan.

All Grade 3 books



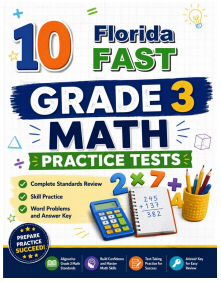
TEXAS STAAR

10 Full-Length Math Practice Tests

Build Grade 3 accuracy, confidence, and test stamina with 10 printable practice tests.

Printable eBook • Instant PDF access

View eBook



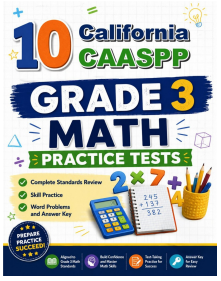
FLORIDA FAST

10 Full-Length Math Practice Tests

Build Grade 3 accuracy, confidence, and test stamina with 10 printable practice tests.

Printable eBook • Instant PDF access

View eBook



CALIFORNIA CAASPP

10 Full-Length Math Practice Tests

Build Grade 3 accuracy, confidence, and test stamina with 10 printable practice tests.

Printable eBook • Instant PDF access

View eBook

Need a different state?
Testinar has Grade 3 math practice books for state assessments across the country.

TESTINAR.COM/GRADES/3