

Equivalent Fractions

Unit 10 Overview: 8 lessons

Students find fractions that name the same amount: with paper strips and area models, on number lines lined up one under another, and by cutting every part into the same number of pieces to find a missing number. They write whole numbers as fractions. Then they compare fractions with the same denominator (same size parts, so more parts is more) and with the same numerator (fewer parts in the whole means bigger parts), and compare in stories, where the wholes must be the same size. In some states the unit ends with 0, $\frac{1}{2}$ and 1 as benchmarks. Cut every strip from one length, so the wholes always match.

THE UNIT, DAY BY DAY

Day 1	Pre-Check	What students already know, before the first lesson.
Day 2	10.1 Equivalent fractions with models	I can show equal fractions with strips and area models.
Day 3	10.2 Equivalent fractions on number lines	I can find equal fractions on a number line.
Day 4	10.3 Find equivalent fractions	I can find and write equivalent fractions.
Day 5	10.4 Whole numbers as fractions	I can write whole numbers as fractions.
Day 6	10.5 Compare with the same denominator	I can compare fractions with the same denominator.
Day 7	10.6 Compare with the same numerator	I can compare fractions with the same numerator.
Day 8	10.7 Compare fractions in stories	I can compare fractions of wholes the same size.
Day 9	10.8 Benchmark fractions ★	I can tell if a fraction is close to 0, one half or 1.
Day 10	Unit Review	The review, to go over together.
Day 11	Unit Test	Form A; Form B (other numbers) is for a retest.

★ Taught in 3rd grade in some states. Skip these lessons if yours teaches them in another grade; animalmath.com/standards shows your state's list.

GET READY FOR THE UNIT

- Paper strips all the same length for every student, to fold into halves, fourths and eighths (and thirds and sixths)
- Pattern blocks for each pair: hexagons, trapezoids, rhombuses and triangles
- Number lines from 0 to 1 in halves, thirds, fourths, sixths and eighths, one under another
- Paper circles in two sizes, for the story lesson
- Cards with $>$, $<$ and $=$

HOW EACH LESSON GOES

- 1. Warm up** (5 min)
- 2. Teach** (10 min)
- 3. Try it together** (10 min)
- 4. Practice** (15 min)
- 5. Exit ticket** (5 min): a quick check on the lesson.

Each lesson page ends with the Animal Math sheets, makers, tools and quizzes for it. "Sheet 3" is the third worksheet of a pack; a color pack prints each sheet again in black and white.

CHECKING AS YOU GO

PRINTABLE	Pre-Check: Day 1, with a key	EXIT TICKET	Exit Tickets: one a lesson, four to a page
PRINTABLE	Unit Review: the day before the test	PRINTABLE	Unit Test: Forms A and B, with keys



Equivalent Fractions

Lesson 10.1: Equivalent fractions with models

GOAL Students show that two fractions are equivalent when they name the same amount of the same whole: they shade strips of one length and area models, and see $\frac{1}{2} = \frac{2}{4} = \frac{4}{8}$.

About 45 minutes

I can show equal fractions with strips and area models.

THE LESSON

- 1 Warm up** (5 min) Put a trapezoid on a hexagon: $\frac{1}{2}$. Students cover the same trapezoid with triangles: 3 triangles, $\frac{3}{6}$. Is $\frac{3}{6}$ the same amount as $\frac{1}{2}$?
- 2 Teach** (10 min) Fold a strip in half and shade one half. Fold a second strip of the same length into fourths and shade until the shading lines up: 2 fourths. Fold a third into eighths: 4 eighths. Write $\frac{1}{2} = \frac{2}{4} = \frac{4}{8}$. Then shade the left half of a square and draw a line across it: 4 parts, 2 shaded, $\frac{2}{4}$. Cutting every part again makes more parts, but the shaded amount stays the same.
Say: "Equivalent fractions name the same amount of the same whole. There are more parts, but each part is smaller."
- 3 Try it together** (10 min) Pairs show $\frac{2}{4} = \frac{4}{8}$ on square paper, then $\frac{2}{2} = \frac{4}{4} = \frac{8}{8}$ with strips, and say why each pair is the same amount.
- 4 Practice** (15 min) Students shade the same amount on the strip below and write the numerator on sheet 1 of Equivalent Fractions, then cut every part of an area model again and write both fractions on sheet 2.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 10.1** and circle a face beside the "I can" line. Question 1: any 2 eighths shaded and $\frac{2}{8}$; shading 1 eighth matched the count of parts, not the amount. Question 2: $\frac{1}{3}$ and $\frac{2}{6}$, in either order; $\frac{2}{3}$ means the shaded small parts were put over the 3 big parts.

Ready for more? Find three fractions equal to $\frac{1}{2}$ with strips.

GET READY

- Paper strips all the same length, four for each student
- Pattern blocks, square paper and crayons

WORDS TO USE

equivalent fractions: fractions that name the same amount

same whole: wholes that are the same size

ASK

- Are the two strips the same length? Why does that matter?
- How many eighths cover the same amount as one half?

WATCH FOR

Shades the same number of parts, not the same amount. Line the strips up at the left and look where the shading ends.

Compares strips of different lengths.

Equivalent fractions need the same whole: cut strips from one length.

Need help? Lay smaller pattern blocks right on top of a bigger one so the amounts match.

ON ANIMAL MATH

PRINTABLE

Equivalent Fractions: sheets 1-2

TOOL

Pattern Blocks: cover a hexagon two ways and compare

QUIZ

Comparing Fractions Quiz: the Equivalent Fractions level

EXIT TICKET

3rd Grade Equivalent and Comparing Fractions Exit Tickets: Exit Ticket 10.1

Equivalent Fractions

Lesson 10.2: Equivalent fractions on number lines

GOAL Students see that equivalent fractions sit at the same point on number lines of the same length: $\frac{1}{2}$ and $\frac{3}{6}$ share a point, and so do $\frac{2}{3}$ and $\frac{4}{6}$.

About 45 minutes

I can find equal fractions on a number line.

THE LESSON

- 1 Warm up** (5 min) Draw a line from 0 to 1 in halves. Students label 0, $\frac{1}{2}$ and 1. Ask: what other fractions might sit at the middle?
- 2 Teach** (10 min) Draw a line in sixths right under the halves, 0 under 0 and 1 under 1, and label the sixths. Lay a ruler straight down from $\frac{1}{2}$: it touches $\frac{3}{6}$. Then draw a line in thirds over the sixths: the ruler from $\frac{2}{3}$ touches $\frac{4}{6}$, so $\frac{2}{3}$ and $\frac{4}{6}$ share a point.
Say: "Fractions at the same point on lines of the same length are equivalent."
- 3 Try it together** (10 min) Pairs label every mark on five lines one under another, then list every fraction that shares a point with $\frac{1}{2}$ and check each with a ruler.
- 4 Practice** (15 min) Students label marks on lines one above the other and write the fractions at the same point on sheet 3 of Equivalent Fractions. Early finishers label every mark on sheet 2 of Fractions on a Number Line.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 10.2** and circle a face beside the "I can" line. Question 1: $\frac{6}{8}$; $\frac{3}{8}$ means the top number was kept from the fourths. Question 2: $\frac{8}{8}$, as $\frac{4}{4}$ and $\frac{8}{8}$ are both at 1; circling $\frac{4}{8}$ means the top numbers were matched.

Need help? Fold a paper strip into fourths, then eighths, and lay it on both lines.

Ready for more? Cut a line in sixths again into twelfths, and find the twelfths at $\frac{1}{3}$ and at $\frac{1}{2}$.

GET READY

- Number lines from 0 to 1 in halves, thirds, fourths, sixths and eighths, one under another
- Rulers to line up points
- Paper strips

WORDS TO USE

same point: the same place on the number line

line up: set the lines so 0 is under 0 and 1 is under 1

ASK

- Which fractions sit at the same point as $\frac{1}{2}$?
- Why must 0 and 1 line up on both lines?
- How many eighths make the same jump as one half?

WATCH FOR

Keeps the same top number ($\frac{2}{4} = \frac{2}{8}$). Count the jumps on the second line from 0 to the point.

Uses lines of different lengths. Line up 0 and 1 first: the wholes must match.

Reads the next mark, not the one straight below. Lay a ruler straight down from the point.

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PRINTABLE

Equivalent Fractions: sheet 3

PRINTABLE

Fractions on a Number Line: sheet 2 for early finishers

QUIZ

Comparing Fractions Quiz: the Equivalent Fractions level

EXIT TICKET

3rd Grade Equivalent and Comparing Fractions Exit Tickets: Exit Ticket 10.2

Equivalent Fractions

Lesson 10.3: Find equivalent fractions

GOAL Students find a missing numerator or denominator in equivalent fractions, first with strips and then by cutting each part into the same number of pieces: cut every part in 2, and the top and the bottom both double.

About 45 minutes

I can find and write equivalent fractions.

THE LESSON

- 1 Warm up** (5 min) Write $2/2 = \square/4$ on the board. Students fold a strip to find the missing number.
- 2 Teach** (10 min) Write $3/2 = 6/\square$. Lay out a strip in halves and half of another: 3 halves. Fold each half in half: now there are 6 fourths, so $3/2 = 6/4$. Each part became 2, so the top and the bottom both doubled. Then go the other way with $10/8 = \square/4$: put the eighths together in twos, and 10 eighths make 5 fourths.
- Say:** "If I cut every part into 2, there are twice as many parts and twice as many shaded. Both numbers change the same way."
- 3 Try it together** (10 min) Pairs solve $2/2 = \square/6$, $5/4 = 10/\square$ and $4/3 = \square/6$ with strips, then each writes one for a partner to solve.
- 4 Practice** (15 min) Students find missing numerators and denominators with strips, then by cutting each part into 2, then in 8 problems with no model on sheet 4 of Equivalent Fractions.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 10.3** and circle a face beside the "I can" line. Question 1: 4 and 1 ($1/2 = 4/8$, $1/2 = 3/6$); 7 in the first means the same number was added to top and bottom. Question 2: $4/6$; circling $2/6$ means the top number was kept.

Need help? Keep strips on the desk and fold or line them up for every problem.

Ready for more? Write $5/2$ with fourths, with sixths and with eighths.

GET READY

- Paper strips of one length for halves, thirds, fourths, sixths and eighths, two of each
- Whiteboards

WORDS TO USE

missing number: the number that makes the two fractions equal

cut each part: split every part into the same number of smaller parts

ASK

- How many times was each part cut?
- Did the top and the bottom change the same way?
- Can you find another fraction equal to this one?

WATCH FOR

Adds the same number to the top and the bottom ($1/2 = 3/4$). Fold the strip: cutting parts multiplies them, it does not add.

Changes only one number. Count both after cutting: all the parts and the shaded parts.

Thinks bigger numbers mean a bigger fraction. Line up the strips: $6/4$ covers the same as $3/2$.

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PRINTABLE

Equivalent Fractions: sheet 4

QUIZ

Comparing Fractions Quiz: the Equivalent Fractions level

EXIT TICKET

3rd Grade Equivalent and Comparing Fractions Exit Tickets: Exit Ticket 10.3

Equivalent Fractions

Lesson 10.4: Whole numbers as fractions

GOAL Students write whole numbers as fractions: the same top and bottom is 1 whole ($2/2 = 1$), a whole number is that many wholes over 1 ($4 = 4/1$), and $4/2$ is 2 wholes.
I can write whole numbers as fractions.

About 45 minutes

THE LESSON

- 1 Warm up** (5 min) Show a circle cut into 2 halves, both shaded. How many halves? How many wholes? $2/2$ is 1 whole.
- 2 Teach** (10 min) Lay out 4 paper halves: they make 2 whole circles. Count the halves: $4/2$. Count the wholes: 2. So $4/2 = 2$. Then show 4 circles not cut at all: each is 1 part of 1, so 4 wholes is $4/1$. On the line from 0 to 3 in halves, $2/2$ is at 1 and $4/2$ at 2.
Say: "When the top and the bottom are the same, the fraction is 1 whole. A whole number over 1 is that many wholes."
- 3 Try it together** (10 min) Pairs build with paper pieces and write each both ways: 12 sixths, 12 fourths, and 7 wholes not cut.
- 4 Practice** (15 min) Students write shaded wholes as fractions and whole numbers, find whole numbers on number lines and fill in missing numbers on sheet 5 of Equivalent Fractions. Early finishers find the whole numbers on the lines past 1 on sheet 5 of Fractions on a Number Line.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 10.4** and circle a face beside the "I can" line. Question 1: 1 and $6/1$; 3 for $3/3$ means the numbers were read, not the parts, and $1/6$ has the numbers swapped. Question 2: $9/3 = 3$; 9 for the whole number means parts were counted, not wholes.

Need help? Build every fraction with paper pieces and put the wholes together before writing.

Ready for more? Write 4 as a fraction with halves, thirds and fourths.

GET READY

- Paper circles and strips cut into halves, fourths and sixths, several wholes of each
- A number line from 0 to 3 in halves on the board

WORDS TO USE

whole number: a number like 0, 1, 2 or 3, with no fraction part

one whole: all the parts of one thing, like $2/2$

over 1: a whole number as a fraction: 7 is $7/1$

ASK

- How many eighths make two wholes?
- Where is $2/2$ on the number line?
- How can you write 8 as a fraction?

WATCH FOR

Thinks $2/2$ is 2. Shade 2 halves of one circle: one whole.

Writes a whole number as 1 over it ($1/5$). Each whole is one part of one: the wholes go on top.

Counts parts, not wholes, for the whole number. Put the parts together into wholes first, then count the wholes.

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PRINTABLE

Equivalent Fractions: sheet 5

PRINTABLE

Fractions on a Number Line: sheet 5 for early finishers

QUIZ

Fractions Quiz: the Whole Numbers level

EXIT TICKET

3rd Grade Equivalent and Comparing Fractions Exit Tickets: Exit Ticket 10.4

Equivalent Fractions

Lesson 10.5: Compare with the same denominator

GOAL Students compare fractions with the same denominator: the parts are the same size, so more parts is more ($2/8 < 5/8$). They write $>$, $<$ or $=$ and say why.

About 45 minutes

I can compare fractions with the same denominator.

THE LESSON

- 1 Warm up** (5 min) Hold up two strips in fourths, one with 1 part shaded and one with 2. Which has more shaded? How do you know?
- 2 Teach** (10 min) Shade $2/8$ on one strip and $5/8$ on another of the same length. The parts are the same size, so more parts shaded is more: $2/8 < 5/8$. Write it with the sign. Then compare $4/6$ and $2/6$ without strips: the same size parts, and 4 is more than 2, so $4/6 > 2/6$. Read both sentences aloud.
Say: "When the denominators are the same, the parts are the same size. More parts means a bigger fraction."
- 3 Try it together** (10 min) Pairs each pick a card with a fraction in sixths or eighths, compare, and put the right sign card between them, checking with strips. Then the class orders three fractions in eighths from least to greatest.
- 4 Practice** (15 min) Students shade strips and circles and write $>$, $<$ or $=$ on sheet 1 of Comparing Fractions, write the sign and circle the reason on sheet 3, and order three fractions on sheet 4.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 10.5** and circle a face beside the "I can" line. Question 1: $1/8 < 4/8$, $5/6 > 1/6$ and $6/8 < 7/8$; a sign the wrong way round may be the sign only, so ask which is bigger. Question 2: $5/6$, the most sixths.

Need help? Shade both fractions on strips of one length and line them up.

Ready for more? Order four fractions in eighths, or name a fraction in sixths between $2/6$ and $5/6$.

GET READY

- Paper strips of one length in fourths, sixths and eighths, two of each for every pair
- Fraction cards in sixths and eighths
- Cards with $>$, $<$ and $=$
- Crayons

WORDS TO USE

greater than: more, written $>$

less than: not as much, written $<$

same denominator: the same bottom number, so the parts are the same size

ASK

- Are the parts the same size? How do you know?
- Which has more parts shaded?
- Read it: $2/8$ is less than $5/8$.

WATCH FOR

Writes the sign backwards. The open side faces the bigger number; read the sentence aloud.

Compares the denominators when they are the same. Same bottom numbers mean same size parts: compare the tops.

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PRINTABLE

Comparing Fractions: sheets 1, 3 and 4

QUIZ

Comparing Fractions Quiz: the Same Denominator level

EXIT TICKET

3rd Grade Equivalent and Comparing Fractions Exit Tickets: Exit Ticket 10.5

Equivalent Fractions

Lesson 10.6: Compare with the same numerator

GOAL Students compare fractions with the same numerator: the same number of parts, but fewer parts in the whole means bigger parts, so $\frac{2}{4} > \frac{2}{6}$.

About 45 minutes

I can compare fractions with the same numerator.

THE LESSON

- 1 Warm up** (5 min) Ask: would you rather have $\frac{1}{2}$ of a sandwich or $\frac{1}{4}$ of the same sandwich? Fold two strips to check.
- 2 Teach** (10 min) Shade $\frac{2}{4}$ on one strip and $\frac{2}{6}$ on another of the same length. Both have 2 parts shaded, but fourths are bigger than sixths, so $\frac{2}{4} > \frac{2}{6}$. Then compare $\frac{1}{6}$ and $\frac{1}{8}$ by thinking: a whole cut into 8 has smaller parts than one cut into 6, so $\frac{1}{6} > \frac{1}{8}$. Write both with signs.
Say: "When the numerators are the same, the smaller denominator has the bigger parts, so it is the bigger fraction."
- 3 Try it together** (10 min) Pairs decide which is greater, $\frac{1}{4}$ or $\frac{1}{8}$, then $\frac{2}{6}$ or $\frac{2}{8}$, and check each with strips. Then they say the rule in their own words.
- 4 Practice** (15 min) Students shade and write the sign on sheet 2 of Comparing Fractions, circle the reason on sheet 3 and compare on two number lines on sheet 4. Early finishers compare unit fractions on sheets 1-2 of Comparing Unit Fractions.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 10.6** and circle a face beside the "I can" line. Question 1: $\frac{3}{8} < \frac{3}{6}$, $\frac{2}{4} > \frac{2}{8}$ and $\frac{1}{3} > \frac{1}{8}$; $\frac{3}{8} > \frac{3}{6}$ means the bigger denominator was taken as bigger. Question 2: $\frac{3}{8}$, the smallest parts.

Need help? Lay strips of one length under each other and shade both fractions.

Ready for more? Order $\frac{2}{3}$, $\frac{2}{4}$, $\frac{2}{6}$ and $\frac{2}{8}$ from least to greatest.

GET READY

- Paper strips of one length in fourths, sixths and eighths
- Cards with $>$, $<$ and $=$

WORDS TO USE

same numerator: the same top number, the same count of parts

bigger parts: parts of a whole cut into fewer pieces

ASK

- Both have 2 parts. Which parts are bigger?
- Why is $\frac{1}{6}$ bigger than $\frac{1}{8}$ when 6 is less than 8?
- Would you rather have $\frac{2}{6}$ or $\frac{2}{8}$ of a pizza?

WATCH FOR

Thinks the bigger denominator means the bigger fraction. Fold strips: more folds make smaller parts.

Says they are equal because the tops match. The same number of parts, but look at their size.

Mixes up the two rules. Ask first: same top or same bottom? Then say the rule.

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PRINTABLE

Comparing Fractions: sheets 2-4

PRINTABLE

Comparing Unit Fractions: sheets 1-2 for early finishers

QUIZ

Comparing Fractions Quiz: the Same Numerator level

EXIT TICKET

3rd Grade Equivalent and Comparing Fractions Exit Tickets: Exit Ticket 10.6

Equivalent Fractions

Lesson 10.7: Compare fractions in stories

GOAL Students compare fractions in stories and check that the wholes are the same size: $\frac{1}{2}$ of a small pizza can be less than $\frac{1}{3}$ of a big one, so the fractions alone cannot tell who has more.

About 45 minutes

I can compare fractions of wholes the same size.

THE LESSON

- 1 Warm up** (5 min) Read: Ana ran $\frac{3}{8}$ of a mile and Ben ran $\frac{7}{8}$ of a mile. Who ran farther? Students say how they know.
- 2 Teach** (10 min) Kai and Lu have sandwiches the same size. Kai eats $\frac{1}{4}$ and Lu eats $\frac{1}{2}$: draw both, $\frac{1}{2} > \frac{1}{4}$, so Lu ate more. Then hold up a small circle and a big one twice as wide: Kai eats $\frac{1}{2}$ of the small pizza and Lu eats $\frac{1}{3}$ of the big pizza. Shade both: Lu ate more, though $\frac{1}{2} > \frac{1}{3}$. The wholes are different, so the fractions alone cannot tell.
Say: "I can compare fractions only when the wholes are the same size. First I check the wholes."
- 3 Try it together** (10 min) Pairs act out two stories with strips: two paths of one length (Mia walks $\frac{2}{6}$ of hers, Leo $\frac{2}{8}$ of his), then two garden rows, one twice as long as the other ($\frac{2}{4}$ of the short row is planted, $\frac{1}{4}$ of the long row). They decide who has more, and find that in the second story $\frac{2}{4}$ and $\frac{1}{4}$ are the same amount.
- 4 Practice** (15 min) Students shade and circle who has more in the stories with the same whole on sheet 5 of Comparing Fractions, and talk through the two where the wholes differ. Early finishers do the stories on sheet 5 of Comparing Unit Fractions.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 10.7** and circle a face beside the "I can" line. Question 1: Ben; circling Zoe means the bigger denominator was taken as more. Question 2: No; two thirds of the long ribbon is more, so Yes means the fractions were compared without looking at the ribbons.

Ready for more? Write a story where $\frac{1}{4}$ is more than $\frac{1}{2}$, and draw it.

GET READY

- Paper strips: two of one length, and a short one with one twice as long
- Paper circles in two sizes, one twice as wide as the other
- Crayons

WORDS TO USE

same whole: wholes that are the same size

fair comparison: comparing parts of wholes the same size

ASK

- Are the two wholes the same size?
- Who has more? How do you know?
- Can you tell from the fractions alone?

WATCH FOR

Compares the fractions without checking the wholes. Draw the two wholes first and ask if they match.

Answers with a fraction, not a name. Read the question again: who ate more?

Need help? Draw each story with two strips cut from one length.

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PRINTABLE

Comparing Fractions: sheet 5

PRINTABLE

Comparing Unit Fractions: sheet 5 for early finishers

QUIZ

Comparing Fractions Quiz: the Which Is Greater? level

EXIT TICKET

3rd Grade Equivalent and Comparing Fractions Exit Tickets: Exit Ticket 10.7

Equivalent Fractions

Lesson 10.8: Benchmark fractions

GOAL

Students tell whether a fraction is closest to 0, $\frac{1}{2}$ or 1: a numerator near 0 means close to 0, near half the denominator means close to $\frac{1}{2}$, near the denominator means close to 1. They check on a number line.

About 45 minutes

★ Taught in 3rd grade in some states

I can tell if a fraction is close to 0, one half or 1.

THE LESSON

- 1 **Warm up** (5 min) How many eighths make one half? How many sixths? How many tenths? Students show on fingers: 4, 3, 5.
- 2 **Teach** (10 min) On the line in tenths, mark 0, $\frac{5}{10}$ (one half) and 1. Put a dot at $\frac{2}{10}$: it is nearer 0. At $\frac{6}{10}$: nearer $\frac{1}{2}$. At $\frac{8}{10}$: nearer 1. Then the shortcut: compare the top number with 0, with half the bottom number and with the bottom number. For $\frac{4}{6}$, half of 6 is 3, and 4 is near 3, so $\frac{4}{6}$ is close to $\frac{1}{2}$.
Say: "I ask: is the top number close to 0, close to half the bottom number, or close to the bottom number?"
- 3 **Try it together** (10 min) Pairs sort cards into close to 0, close to $\frac{1}{2}$ and close to 1: $\frac{1}{12}$, $\frac{0}{6}$, $\frac{4}{10}$, $\frac{3}{5}$, $\frac{11}{12}$ and $\frac{8}{8}$, and check $\frac{4}{10}$ on the number line.
- 4 **Practice** (15 min) Students circle 0, $\frac{1}{2}$ or 1 for shaded bars and circles on sheet 1 of Benchmark Fractions, use number lines on sheet 2 and find half the denominator on sheet 3.
- 5 **Exit ticket** (5 min) Students do **Exit Ticket 10.8** and circle a face beside the "I can" line. Question 1: $\frac{2}{5}$ is closest to $\frac{1}{2}$; circling 0 means only the small numbers were seen. Question 2: $\frac{1}{5}$ is closer to 0 and $\frac{4}{5}$ closer to 1.

Need help? Place each fraction on a number line in tenths with 0, $\frac{1}{2}$ and 1 marked in color.

Ready for more? Write a fraction in eighths close to each benchmark, or tell why $\frac{2}{8}$ is exactly between 0 and $\frac{1}{2}$.

GET READY

- A number line from 0 to 1 in tenths with 0, $\frac{1}{2}$ and 1 marked, large on the board
- Fraction cards to sort into three groups

WORDS TO USE

benchmark: a number we know well and compare with: 0, $\frac{1}{2}$ or 1

closest to: the nearest one on the number line

half the denominator: the top number that makes $\frac{1}{2}$, like 4 for eighths

ASK

- What is half of 10? Is 6 close to it?
- Is $\frac{2}{10}$ closer to 0 or to $\frac{1}{2}$? Show me on the line.
- Which is closer to 1, $\frac{8}{10}$ or $\frac{6}{10}$?

WATCH FOR

Thinks $\frac{5}{10}$ is close to 1 because 5 and 10 are big numbers. Find half the denominator: 5 is half of 10, so $\frac{5}{10}$ is one half.

Looks only at the top number. Always compare the top number with the bottom number.

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PRINTABLE

Benchmark Fractions: sheets 1-3

EXIT TICKET

3rd Grade Equivalent and Comparing Fractions Exit Tickets: Exit Ticket 10.8