

Fraction Match Lab

Build equivalent amounts and mark their shared point.

GRADE 3 • TEKS 3.3.F

3.3.F "represent equivalent fractions with denominators of 2, 3, 4, 6, and 8 using a variety of objects and pictorial models, including number lines;"

NAME _____

DATE _____

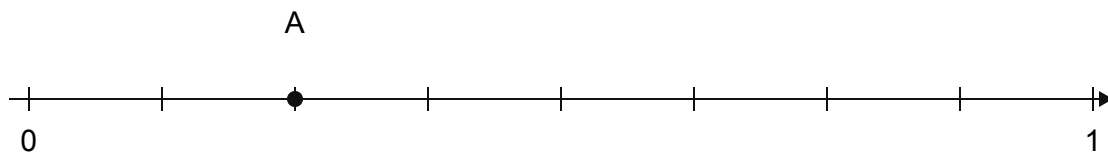
Keep the whole the same

Per pair: 24 equal counters, six same-size paper strips, and a pencil. Fold strips by matching edges to make equal parts. One whole is one full strip or all 24 counters. Equivalent fractions name the same amount of the same whole.

Worked example

Use all 24 counters as one whole. Make 8 equal groups and select 2 groups. Regroup into 4 equal groups without changing the selected counters.

Same whole: 0 to 1 (whole)



1. Each eighth has 3 counters, so 2 eighths is 6 counters.
2. Each fourth has 6 counters. The same selected amount is 1 fourth.

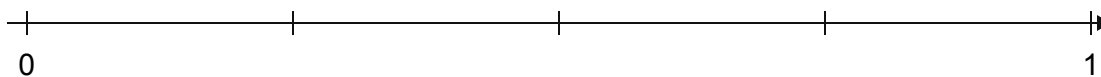
$2/8 = 1/4$. Both names belong at A, one fourth of the way from 0 to 1.

Make each model with a partner. Keep your shaded strips. Each line is one whole: mark A at the modeled amount, label A with BOTH fraction names, and write the equality below.

Practice 1

Fold a strip into 2 equal parts and shade 1. Fold again into 4 equal parts. How many fourths stay shaded? Complete the line and equality.

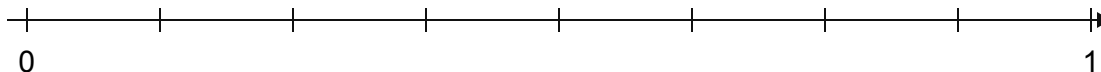
Same whole: 0 to 1 (whole)



Practice 2

Fold a fresh strip into 4 equal parts and shade 3. Fold again into 8 equal parts. How many eighths stay shaded? Complete the line and equality.

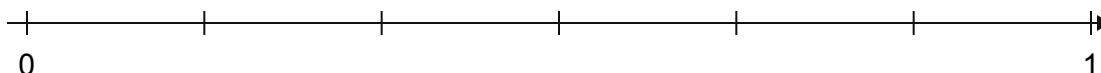
Same whole: 0 to 1 (whole)



Practice 3

Make 3 equal groups from all 24 counters. Select 2 groups. Regroup the whole set into 6 equal groups, keeping the same counters selected. How many sixths are selected? Complete the line and equality.

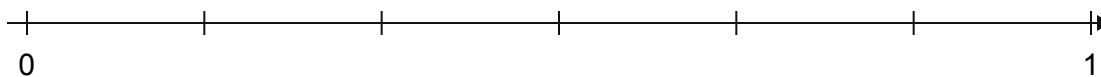
Same whole: 0 to 1 (whole)



Practice 4

Reset all 24 counters into 3 equal groups. Select 1 group. Regroup into 6 equal groups, keeping the same counters selected. Complete the line and equality. How many counters stay selected?

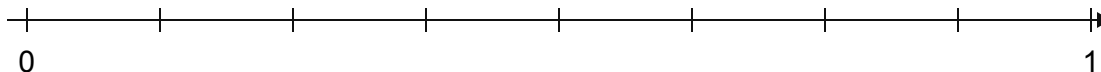
Same whole: 0 to 1 (whole)



Apply It 1

Use two fresh strips. Shade 1 of 2 equal parts on one; shade 4 of 8 equal parts on the other. Complete the line and equality. Explain why the shaded amounts match.

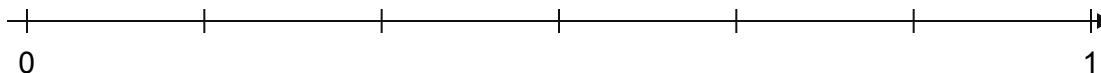
Same whole: 0 to 1 (whole)



Apply It 2

Use all 24 counters. Select 3 of 6 equal groups. Regroup into 2 equal groups, keeping the same counters selected. Complete the line and equality. Explain what stayed the same.

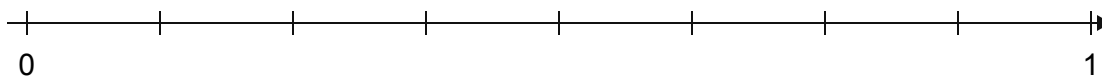
Same whole: 0 to 1 (whole)



Challenge

Model half using strips or 24 counters. Mark A at half. Label it with equivalent names in halves, fourths, sixths, and eighths. Could a whole-number count of thirds equal half? Explain.

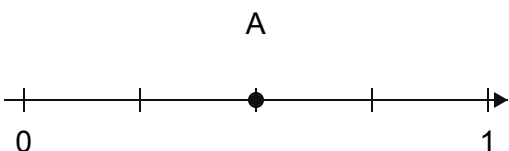
Same whole: 0 to 1 (whole)



PRACTICE 1

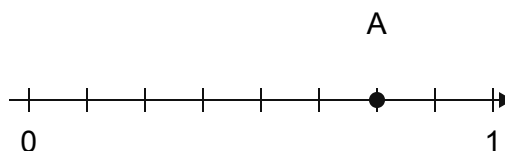
The same shaded half is 2 fourths. A is at $1/2 = 2/4$.

Same whole: 0 to 1 (whole)

**PRACTICE 2**

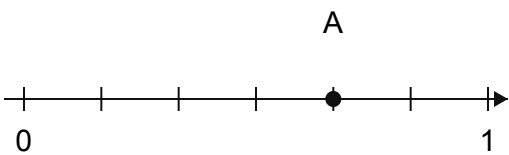
The same shaded region is $3/4 = 6/8$. A is at the sixth of eight intervals.

Same whole: 0 to 1 (whole)

**PRACTICE 3**

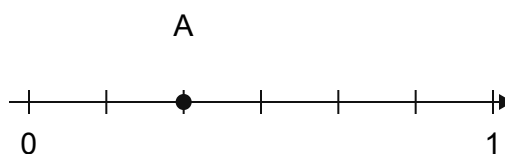
16 counters are selected: 2 of 3 groups of 8 or 4 of 6 groups of 4. A is at $2/3 = 4/6$.

Same whole: 0 to 1 (whole)

**PRACTICE 4**

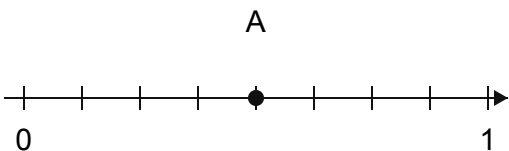
8 counters stay selected. A is at $1/3 = 2/6$.

Same whole: 0 to 1 (whole)

**APPLY IT 1**

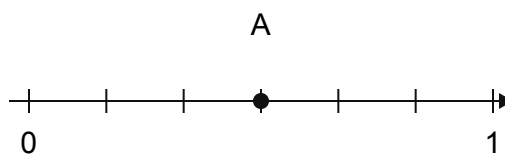
$1/2 = 4/8$. A is halfway from 0 to 1. Equal-size strips have the same shaded length. Check the physical model as well as the two fraction labels at the shared point.

Same whole: 0 to 1 (whole)

**APPLY IT 2**

12 of 24 counters stay selected. $3/6 = 1/2$, at the midpoint A. Both the whole set and selected amount stay the same. Check the physical model as well as the two fraction labels at the shared point.

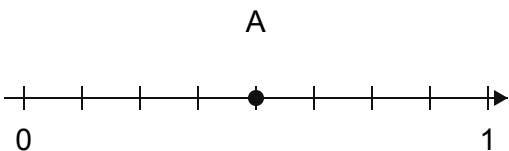
Same whole: 0 to 1 (whole)



CHALLENGE

A is at $1/2 = 2/4 = 3/6 = 4/8$. No whole-number count of thirds is half: one third is less and two thirds are more.

Same whole: 0 to 1 (whole)



TEACHER NOTES

Observe the physical strip folds and counter groups. All parts of a strip must be equal; all sets retain 24 counters. Accept equivalent labels written together beside A even though the printed key uses a single A. Count intervals, not tick marks. Students keep their marked strips as pictorial models; no cutting or extra graph paper is needed. A common point alone should not replace the required object model.