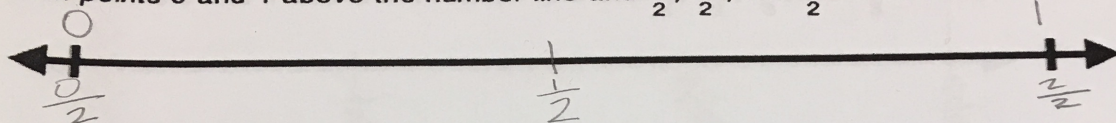


Equivalent Fractions

Number Lines, Area Models, & Equations
M3 L1

1. Make fractions equal to $\frac{1}{2}$.

Mark points 0 and 1 above the number line and $\frac{0}{2}$, $\frac{1}{2}$, and $\frac{2}{2}$ below it.



Draw 1 vertical line down the middle of each square, creating 2 equal parts.
Shade the left half of each square.

Partition with horizontal lines to show the equivalent fractions $\frac{2}{4}$, $\frac{3}{6}$, $\frac{4}{8}$, and $\frac{5}{10}$.

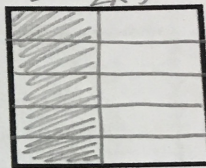
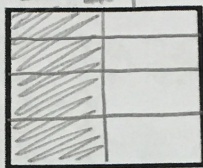
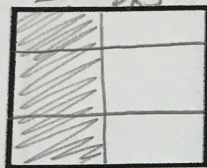
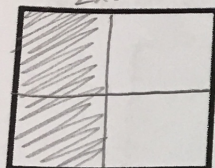
Use multiplication to show the change in units.

$$\frac{1}{2} = \frac{1 \times 2}{2 \times 2} = \frac{2}{4}$$

$$\frac{1}{2} = \frac{1 \times 3}{2 \times 3} = \frac{3}{6}$$

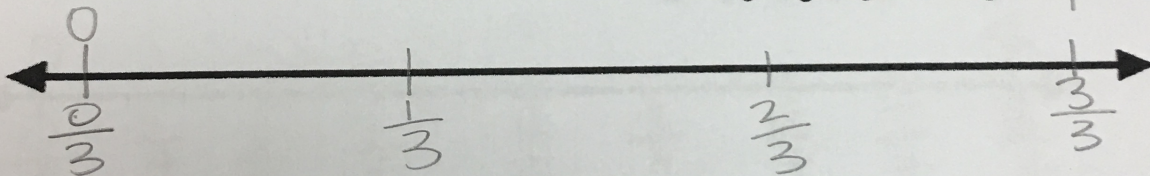
$$\frac{1}{2} = \frac{1 \times 4}{2 \times 4} = \frac{4}{8}$$

$$\frac{1}{2} = \frac{1 \times 5}{2 \times 5} = \frac{5}{10}$$



2. Make fractions equal to $\frac{1}{3}$.

Mark points 0 and 1 above the number line and $\frac{0}{3}$, $\frac{1}{3}$, $\frac{2}{3}$, and $\frac{3}{3}$ below it.



Draw 2 squares that are the same size.

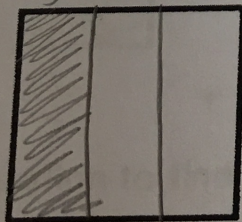
Draw 2 vertical lines in each square, creating 3 equal parts.

Shade the left third of both squares.

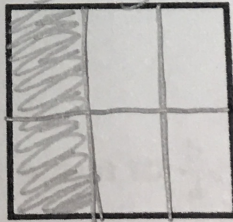
Partition only the 2nd square with 1 horizontal line in the middle.

Use multiplication to show the change in units.

$$\frac{1}{3}$$



$$\frac{1}{3} = \frac{1 \times 2}{3 \times 2} = \frac{2}{6}$$

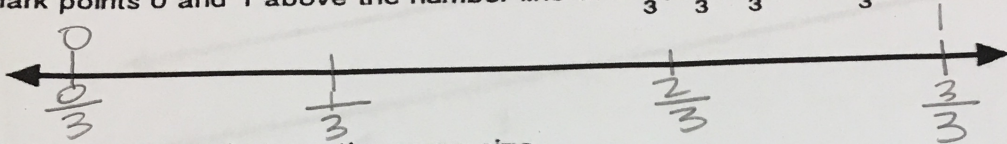


Equivalent Fractions

Number Lines, Area Models, & Equations
M3 L1

3. Make fractions equal to $\frac{2}{3}$.

Mark points 0 and 1 above the number line and $\frac{0}{3}$, $\frac{1}{3}$, $\frac{2}{3}$, and $\frac{3}{3}$ below it.



Draw 3 squares that are the same size.

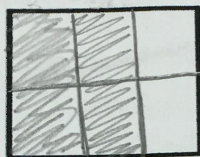
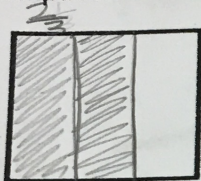
Draw 2 vertical lines in each square, creating 3 equal parts.

Shade the 2 thirds on the left side of all 3 squares.

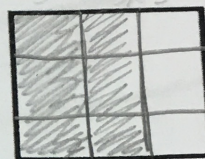
Partition only the 2nd square with 1 horizontal line in the middle.

Partition only the 3rd square with 2 horizontal lines creating equally-sized parts.

Use multiplication to show the change in units.



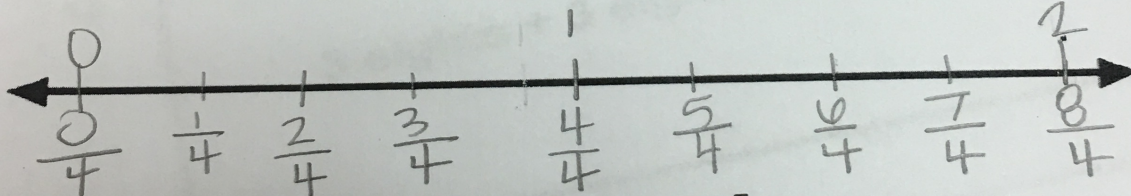
$$\frac{2}{3} = \frac{2 \times 2}{3 \times 2} = \frac{4}{6}$$



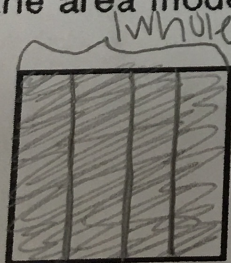
$$\frac{2}{3} = \frac{2 \times 3}{3 \times 3} = \frac{6}{9}$$

4. Make fractions equal to $\frac{5}{4}$.

Mark points 0, 1, & 2 above the number line and $\frac{0}{4}$, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{3}{4}$, $\frac{4}{4}$, and $\frac{5}{4}$ below it.

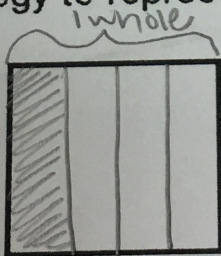


Use the area model strategy to represent $\frac{5}{4}$.



$$\frac{4}{4}$$

+



$$\frac{1}{4}$$

$$= \frac{5}{4}$$

Use multiplication to find a fraction that is equal to $\frac{5}{4}$. $\frac{5}{4} = \frac{5 \times 2}{4 \times 2} = \frac{10}{8}$