

Understand Equivalent Fractions

Name: _____

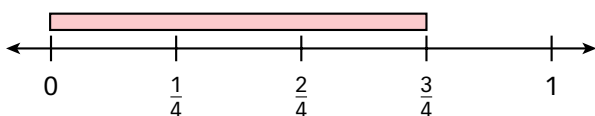
Prerequisite: How can you model fractions?



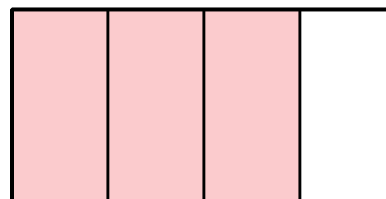
Study the example showing a fraction with a number line and with a shaded shape. Then solve problems 1–6.

Example

Here are two models that show $\frac{3}{4}$.

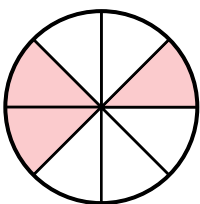


This section on the number line shows $\frac{3}{4}$.

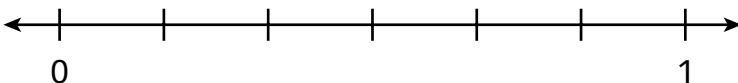


3 parts shaded
4 equal parts in the whole
The fraction is $\frac{3}{4}$.

1 What fraction of the circle is shaded? _____



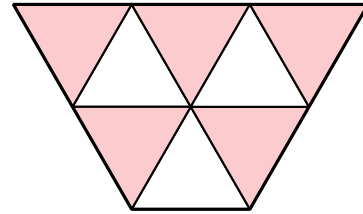
2 Label the marks on the number line with fractions.
Draw a section to show $\frac{3}{6}$.



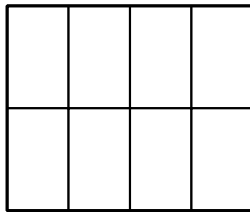
Solve.

- 3 What part of the whole shape is shaded?

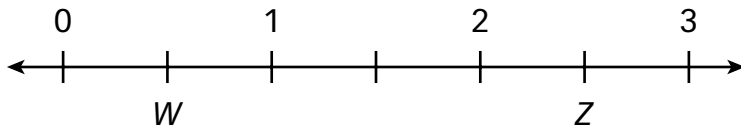
Write the fraction. _____



- 4 Shade to show $\frac{7}{8}$ of the rectangle. Write the fraction for the part that is **not** shaded. _____

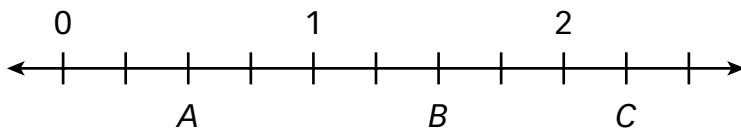


- 5 Tell whether each statement is correct. Choose *Yes* or *No*.



- a. The fraction for point *W* is $\frac{1}{2}$. Yes No
- b. The fraction for point *W* is 2. Yes No
- c. The fraction for point *Z* is $\frac{6}{2}$. Yes No
- d. The fraction for point *Z* is $\frac{5}{2}$. Yes No

- 6 Write the fraction for each letter on the number line. There may be more than one correct answer.

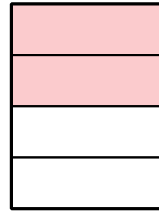
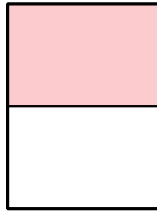
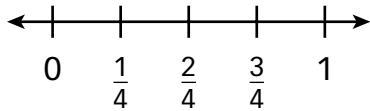
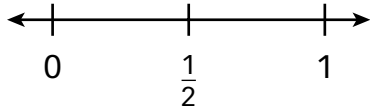


- A** _____
- B** _____
- C** _____

Show Equivalent Fractions

Study how the example shows equivalent fractions with shaded shapes and number lines. Then solve problems 1–5.

Example



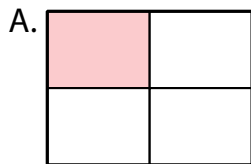
$\frac{1}{2}$ and $\frac{2}{4}$ are at the same place on the number lines.

Both rectangles have the same amount of shading.

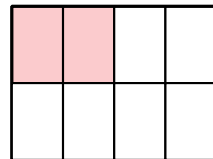
$\frac{1}{2}$ is equivalent to $\frac{2}{4}$.

$\frac{1}{2}$ is equivalent to $\frac{2}{4}$.

1 Do these shapes show equivalent fractions? Circle Yes or No.

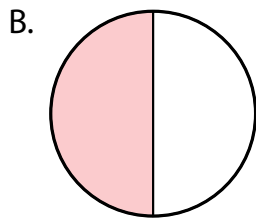


$\frac{1}{4}$

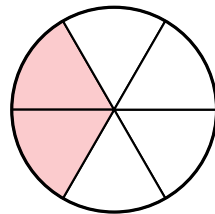


$\frac{2}{8}$

Yes No



$\frac{1}{2}$



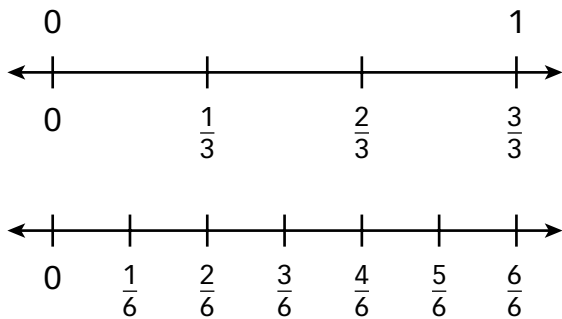
$\frac{2}{6}$

Yes No

Vocabulary

equivalent fractions
fractions that name the same number.
 $\frac{1}{2}$ and $\frac{2}{4}$ are equivalent.

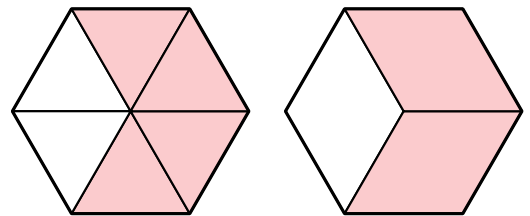
Solve. Use the number lines to identify equivalent fractions in problems 2 and 3.



2 $\frac{2}{6} =$ _____

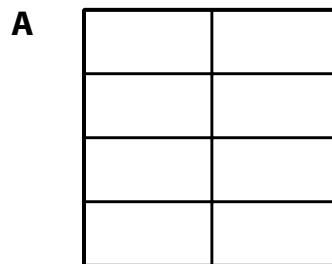
3 $\frac{2}{3} =$ _____

4 Look at the fractions shown by the shaded hexagons. Write equivalent fractions for the shaded parts.

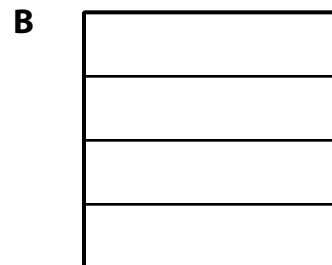


$$\frac{\square}{\square} = \frac{\square}{\square}$$

5 Shade $\frac{6}{8}$ of rectangle A.



Shade rectangle B to show a fraction equivalent to $\frac{6}{8}$.



Write the equivalent fraction. _____

Reason and Write

Study the example problem. Underline two parts that you think make it a particularly good answer and a helpful example.

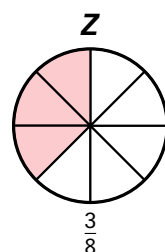
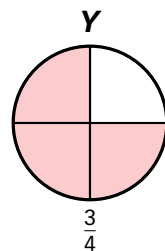
Example

Arlene drew circles Y and Z. She separated Y into fourths. She separated Z into eighths. She shaded 3 parts of Y. Then she shaded Z to show a fraction equivalent to the fraction for Y.

Arlene said, "Both circles have 3 parts that are shaded. That means that the fractions are equivalent: $\frac{3}{4} = \frac{3}{8}$."

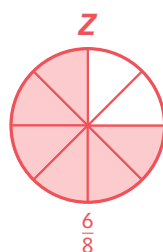
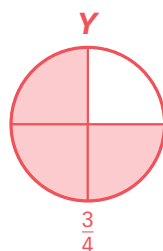
What did Arlene do right? What did she do wrong?

Show your work. Use pictures, words, or numbers to explain.



Arlene correctly made equal parts in both circles. She named the correct fractions for the parts she shaded.

Her mistake was shading only 3 parts of Z. The shading in both circles must cover the same amount of the whole to show equivalent fractions. Arlene should have shaded 6 parts of Z to show that $\frac{6}{8}$ is equivalent to $\frac{3}{4}$.



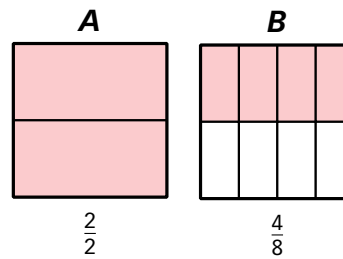
Where does the example ...

- use a picture to explain?
- use numbers to explain?
- use words to explain?
- give details?



Solve the problem. Use what you learned from the example.

Shelley drew squares *A* and *B* to show equivalent fractions. She said, "I separated square *A* into 2 equal parts and square *B* into 8 equal parts. Then I shaded 2 parts of *A*. I shaded 4 parts of *B* to show an equivalent fraction. Since *B* has more equal parts, I doubled the number of shaded parts."



What did Shelley do right? What did she do wrong?

Show your work. Use pictures, words, or numbers to explain how you decided what to draw.

Did you ...

- use a picture to explain?
- use numbers to explain?
- use words to explain?
- give details?

