

Homework & Practice 8-1

Equivalent Fractions: Area Models

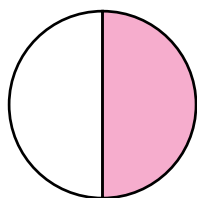
Another Look!

Use an area model to find two fractions equivalent to $\frac{1}{2}$.

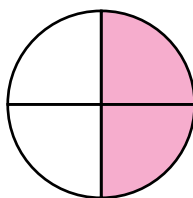


Many fractions are equivalent to $\frac{1}{2}$.

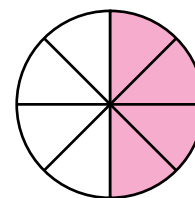
The circle is divided into 2 equal parts. The shaded part represents $\frac{1}{2}$.



Divide the circle into 4 equal parts. The shaded part represents $\frac{2}{4}$.

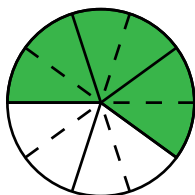


Divide the circle into 8 equal parts. The shaded part represents $\frac{4}{8}$.

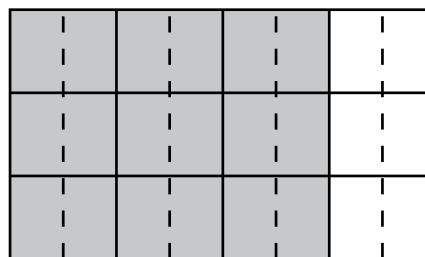


$\frac{1}{2}$, $\frac{2}{4}$, and $\frac{4}{8}$ are equivalent fractions.

1. Write a fraction equivalent to $\frac{3}{5}$.



2. Write two fractions equivalent to $\frac{9}{12}$.



For 3–10, draw an area model or use fraction strips to solve each problem.

3. $\frac{3}{5} = \frac{\square}{10}$

4. $\frac{3}{6} = \frac{\square}{12}$

5. $\frac{4}{10} = \frac{\square}{5}$

6. $\frac{3}{4} = \frac{\square}{8}$

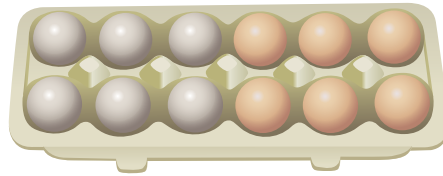
7. $\frac{5}{10} = \frac{1}{\square}$

8. $\frac{4}{6} = \frac{\square}{12}$

9. $\frac{5}{5} = \frac{\square}{10}$

10. $\frac{1}{2} = \frac{6}{\square}$

11. Write two equivalent fractions to describe the portion of the eggs that are brown.



For 12–13, use the table at the right.

12. The results of an election for mayor are shown at the right. Which candidate received the most votes and which received the least votes?

Candidate	Number of Votes
Leonard Hansen	12,409
Margaret O'Connor	12,926
Jillian Garcia	12,904

13. How many people voted for the three candidates?

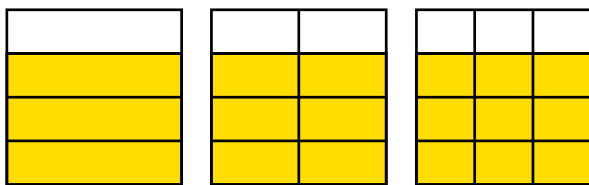
14. **MP.2 Reasoning** Tell what operations are needed to solve the following problem. Then solve the problem.

The school auditorium has 22 rows with 28 seats each. At a school concert, 19 seats were empty. How many seats were filled?

15. **Higher Order Thinking** Barbara is tiling her craft room floor with square tiles. She wants $\frac{6}{10}$ of the square tiles to be red. If she uses 18 red tiles, how many square tiles will be used to cover the floor? Draw an area model to help solve.

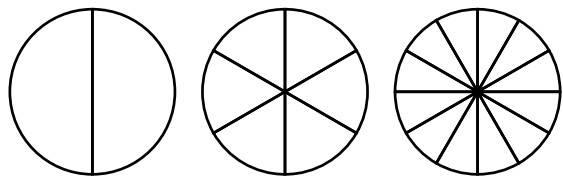
Common Core Assessment

16. Select all the fractions that are equivalent to $\frac{3}{4}$. Use the area models to help.



- $\frac{6}{6}$
 $\frac{2}{8}$
 $\frac{9}{12}$
 $\frac{6}{8}$
 $\frac{1}{2}$

17. Select all the pairs that are equivalent fractions. Use the area models to help.



- $\frac{1}{6}$, $\frac{3}{12}$
 $\frac{2}{6}$, $\frac{4}{12}$
 $\frac{3}{6}$, $\frac{1}{2}$
 $\frac{1}{6}$, $\frac{6}{12}$
 $\frac{6}{6}$, $\frac{12}{12}$