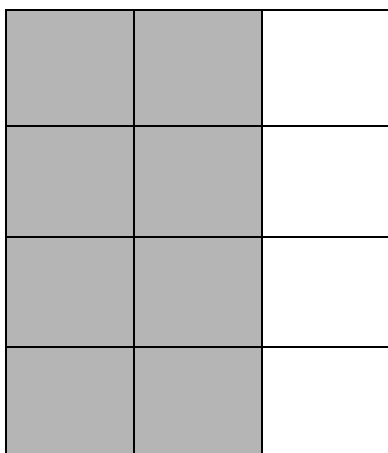




John folded a paper into thirds and shaded two parts. He then folded the paper into fourths. Here is what John's paper looks like.



- Write two different fractions that describe the amount that is shaded.

$$\frac{8}{12} \quad \frac{4}{6} \quad \frac{2}{3}$$

- Explain why the two fractions are equal.  
Each fraction represents the same amount of the rectangle, so they are equivalent.

Each column represents one third of the rectangle, so two thirds is shaded. Each half-column represents one sixth of the rectangle, so four sixths is shaded. Two full columns, four half-columns, and eight small sections show the same amount.

Sabrina folded a strip of paper and then shaded a portion of it. Here is what Sabrina's strip of paper looks like.



- Write three fractions that describe the amount that is shaded.

$$\frac{4}{16} \quad \frac{2}{8} \quad \frac{1}{4}$$

- Explain why the fractions are equal.  
Four sixteenths is four of the 16 sections.

One fourth is one of the four sections that are separated by a thick bold line. Each section contains four smaller sections, so  $\frac{1}{4}$  is four of the 16 sections.

Two eighths is two of the eight sections that are separated by a bold line, so  $\frac{2}{8}$  is four of the 16 sections.



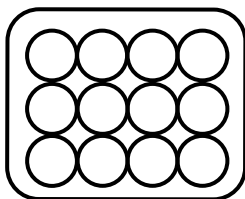
Write a fraction equivalent to each of the following fractions. Explain how you found your answers.

5.  $\frac{2}{5} = \frac{4}{10}$  I multiplied both the numerator and the denominator by two.

6.  $\frac{8}{10} = \frac{4}{5}$  I divided both the numerator and the denominator by two.

Note that many other answers are possible for problems 5 and 6.

Henry bought a 12-pack of Gatorade. He and his friends drank eight bottles after soccer practice.



7. What fraction of the case of Gatorade did Henry and his friends drink?

$\frac{8}{12}$      $\frac{4}{6}$      $\frac{2}{3}$

8. Explain why there are three correct answers to problem seven.

Eight of the 12 bottles represent  $\frac{8}{12}$  of the case.

Each row has four bottles, so two rows have eight bottles. This means that  $\frac{2}{3}$  is equal to  $\frac{8}{12}$ .

Each half-row has two bottles, so four half-rows have eight bottles. This means that  $\frac{4}{6}$  is equal to  $\frac{8}{12}$ .