


Chapter 4 Rational Numbers

Lesson 4-6 Multiply Fractions

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 Find $\frac{2}{5} \times \frac{15}{16}$.

$$\frac{2}{5} \times \frac{15}{16} = \frac{\cancel{2}^1}{5} \times \frac{\cancel{15}^3}{\cancel{16}_8}$$


Divide 2 and 16 by their GCF, 2. Divide 5 and 15 by their GCF, 3.

$$= \frac{1 \times 3}{1 \times 8}$$

Multiply the numerators. Multiply the denominators.

$$= \frac{3}{8}$$

Simplify.

 One evening, $\frac{2}{3}$ of the students in Rick's class watched television. Of those students, $\frac{3}{8}$ watch a reality show. Of the students that watched a reality show, $\frac{1}{4}$ of them recorded the show. What fraction of the students in Rick's class watched and recorded a reality TV show?

Let s represent the fraction of students in Rick's class who watched and recorded a reality TV show.

$$s = \frac{1}{4} \times \frac{2}{3} \times \frac{3}{8}$$

Write the equation.

$$s = \frac{1}{4} \times \frac{\cancel{2}^1}{\cancel{3}_1} \times \frac{\cancel{3}^1}{\cancel{8}_4}$$

Divide 2 and 8 by their GCF, 2. Divide 3 and 3 by their GCF, 3.

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

Multiply the numerators. Multiply the denominators.

$$s = \frac{1}{16}$$

Simplify.

So, $\frac{1}{16}$ of Rick's class watched and recorded a reality TV show.