

Estimating Products and Quotients of Fractions and Mixed Numbers

You can estimate products and quotients of fractions and mixed numbers using rounding and compatible numbers. Compatible numbers are rounded to make it easy to compute with them mentally.

EXAMPLE

1 Estimate each product or quotient.

a. $\frac{5}{16} \times 30$

$$\frac{5}{16} \times 30 \rightarrow \frac{1}{3} \times 30$$

$\frac{5}{16}$ is close to $\frac{5}{15}$ and $\frac{5}{15} = \frac{1}{3}$.

$\frac{1}{3}$ and 30 are compatible numbers.

Think: $\frac{1}{3} \times 30 = 10$

$\frac{5}{16} \times 30$ is about 10.

b. $9\frac{7}{8} \div 5$

$9\frac{7}{8} \div 5 \rightarrow 10 \div 5 = 2$ Round $9\frac{7}{8}$ to 10. 10 and 5 are compatible numbers.

$9\frac{7}{8} \div 5$ is about 2.