Get Started

WORDS YOU NEED to Know

1. Match each term with the example that most closely represents it.

a) opposite integers **d)** lowest common denominator **g)** power
b) numerator **e)** mixed number **h)** base of a power
c) denominator **f)** improper fraction **i)** exponent

i) $\dfrac{34}{9}$

ii) $1\dfrac{2}{3}$

iii) 7^{3}

iv) $+5$ and -5

v) 7^{3}

vi) $\dfrac{5}{7}$

vii) $\dfrac{2}{3} = \dfrac{10}{15}$
$\dfrac{1}{5} = \dfrac{3}{15}$

viii) 7^{3}

ix) $\dfrac{5}{7}$

SKILLS AND CONCEPTS You Need

Addition of Fractions

You can add two fractions using fraction strips, number lines, or by using a common denominator.
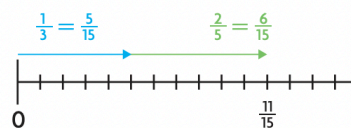
EXAMPLE

$\dfrac{1}{3} + \dfrac{2}{5}$

Solution: common denominator

$= \dfrac{1 \times 5}{3 \times 5} + \dfrac{2 \times 3}{5 \times 3}$

$= \dfrac{5}{15} + \dfrac{6}{15}$

$= \dfrac{11}{15}$

Solution: fraction strips

Solution: number line

$\dfrac{1}{3} = \dfrac{5}{15}$ $\dfrac{2}{5} = \dfrac{6}{15}$

0   $\dfrac{11}{15}$ 1

2. Determine each sum.

a) $\dfrac{1}{2} + \dfrac{1}{3}$

b) $\dfrac{3}{4} + \dfrac{1}{8}$

c) $\dfrac{3}{10} + \dfrac{3}{5}$

d) $\dfrac{2}{5} + \dfrac{2}{3}$

Subtraction of Fractions

You can subtract two fractions using fraction strips, number lines, or by using a common denominator.
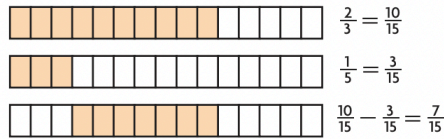
$$\frac{2}{3} - \frac{1}{5}$$

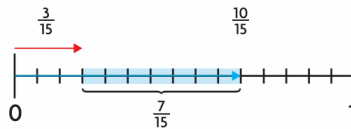**Solution: common denominator**

$$= \frac{2 \times 5}{3 \times 5} - \frac{1 \times 3}{5 \times 3}$$

$$= \frac{10}{15} - \frac{3}{15}$$

$$= \frac{7}{15}$$

Solution: fraction strips

$\frac{2}{3} = \frac{10}{15}$

$\frac{1}{5} = \frac{3}{15}$

$\frac{10}{15} - \frac{3}{15} = \frac{7}{15}$

Solution: number line

3. Determine each difference.

   a) $\frac{1}{2} - \frac{1}{3}$ b) $\frac{3}{4} - \frac{1}{8}$ c) $\frac{3}{5} - \frac{3}{10}$ d) $\frac{6}{7} - \frac{1}{2}$

Multiplication of Fractions

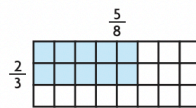You can use an area model to help you visualize the product of two fractions.

$$\frac{5}{8} \times \frac{2}{3}$$

Solution: multiplying

$$= \frac{5 \times 2}{8 \times 3}$$

$$= \frac{10}{24}$$

$$= \frac{5}{12}$$

Solution: area model

4. Determine each product.

   a) $\frac{1}{2} \times \frac{1}{4}$ c) $\frac{2}{5} \times \frac{3}{10}$

   b) $\frac{2}{3} \times \frac{3}{4}$ d) $\frac{1}{6} \times \frac{4}{5}$