

Using Equivalent Fractions to Find Common Denominators

- 1 Fill in the table by using the information given to help you find equivalent fractions.

Fraction	Multiply Both the Numerator and Denominator by:	Number Sentence	Equivalent Fraction
$\frac{1}{2}$	2	$\frac{(1 * 2)}{(2 * 2)} = \frac{2}{4}$	$\frac{2}{4}$
	3	$\frac{(1 * 3)}{(2 * 3)} = \frac{3}{6}$	$\frac{3}{6}$
	5	$\frac{(1 * 5)}{(2 * 5)} = \frac{5}{10}$	$\frac{5}{10}$
$\frac{2}{5}$	2	$\frac{(2 * 2)}{(5 * 2)} = \frac{4}{10}$	$\frac{4}{10}$
	3	$\frac{(2 * 3)}{(5 * 3)} = \frac{6}{15}$	$\frac{6}{15}$
	5	$\frac{(2 * 5)}{(5 * 5)} = \frac{10}{25}$	$\frac{10}{25}$

What do you notice about the fractions in the gray shaded boxes? Sample answer: They have a common denominator, 10.

- 2 Use the table above to help you solve the following problems.

a. $\frac{1}{2} + \frac{2}{5} = \frac{9}{10}$

b. $\frac{1}{2} - \frac{2}{5} = \frac{1}{10}$

- c. Fill in the blank with <, >, or =.

$\frac{1}{2} > \frac{2}{5}$

- 3 Fill in the table by using the information given to help you find equivalent fractions.

Fraction	Multiply Both the Numerator and Denominator by:				
	2	3	4	5	6
$\frac{2}{3}$	$\frac{4}{6}$	$\frac{6}{9}$	$\frac{8}{12}$	$\frac{10}{15}$	$\frac{12}{18}$
$\frac{1}{6}$	$\frac{2}{12}$	$\frac{3}{18}$	$\frac{4}{24}$	$\frac{5}{30}$	$\frac{6}{36}$
$\frac{1}{3}$	$\frac{2}{6}$	$\frac{3}{9}$	$\frac{4}{12}$	$\frac{5}{15}$	$\frac{6}{18}$

Solving Problems Using Common Denominators

Lesson 5-1

DATE _____

TIME _____



- 1 Solve. Use the tables on journal page 154 to find equivalent fractions with a common denominator. Write a number sentence showing the fractions you used.

a. $\frac{1}{3} - \frac{1}{6} = ?$

Common denominator: 6

$$\frac{2}{6} - \frac{1}{6} = \frac{1}{6}$$

(number sentence)

b. $\frac{1}{3} + \frac{1}{2} = ?$

Common denominator: 6

$$\frac{2}{6} + \frac{3}{6} = \frac{5}{6}$$

(number sentence)

- 2 List four equivalent fractions for each fraction given. **Sample answers:**

a. $\frac{1}{4} = \frac{2}{8}, \frac{3}{12}, \frac{4}{16}, \frac{5}{20}$

b. $\frac{1}{5} = \frac{2}{10}, \frac{3}{15}, \frac{4}{20}, \frac{5}{25}$

- 3 Make an estimate. Then solve by finding fractions with a common denominator. Use the tables and lists of equivalent fractions above and on journal page 154 to help you. Write a number sentence with a common denominator to summarize each problem.

a. $\frac{1}{2} - \frac{1}{4} = ?$

Sample answer:
Estimate: between 0 and $\frac{1}{2}$

Common denominator: 4

$$\frac{2}{4} - \frac{1}{4} = \frac{1}{4}$$

(number sentence)

$$\frac{1}{2} - \frac{1}{4} = \frac{1}{4}$$

b. $\frac{1}{2} + \frac{1}{6} = ?$

Sample answer:
Estimate: a little more than $\frac{1}{2}$

Common denominator: 6

$$\frac{3}{6} + \frac{1}{6} = \frac{4}{6}$$

(number sentence)

$$\frac{1}{2} + \frac{1}{6} = \frac{4}{6}$$

c. $\frac{1}{4} + \frac{2}{3} = ?$

Sample answer:
Estimate: close to 1

Common denominator: 12

$$\frac{3}{12} + \frac{8}{12} = \frac{11}{12}$$

(number sentence)

$$\frac{1}{4} + \frac{2}{3} = \frac{11}{12}$$

d. $\frac{1}{4} - \frac{1}{6} = ?$

Sample answer:
Estimate: a little more than 0

Common denominator: 12

$$\frac{3}{12} - \frac{2}{12} = \frac{1}{12}$$

(number sentence)

$$\frac{1}{4} - \frac{1}{6} = \frac{1}{12}$$

- 4 Rewrite the fractions as equivalent fractions with a common denominator. Fill in the blank with $>$, $<$, or $=$ to make a true number sentence.

a. $\frac{1}{2} > \frac{2}{5}$ Fractions with a common denominator: $\frac{5}{10}, \frac{4}{10}$

b. $\frac{1}{3} = \frac{2}{6}$ Fractions with a common denominator: $\frac{2}{6}, \frac{2}{6}$