

**LESSON**  
**5-2** **Practice A**  
***Adding and Subtracting with Unlike Denominators***

Write the least common denominator for each pair of fractions.

1.  $\frac{1}{2}, \frac{2}{4}$   
\_\_\_\_\_

2.  $\frac{1}{8}, \frac{2}{3}$   
\_\_\_\_\_

3.  $\frac{1}{6}, \frac{1}{4}$   
\_\_\_\_\_

4.  $\frac{1}{3}, \frac{1}{5}$   
\_\_\_\_\_

5.  $\frac{1}{5}, \frac{3}{4}$   
\_\_\_\_\_

6.  $\frac{1}{5}, \frac{7}{10}$   
\_\_\_\_\_

Add or subtract. Write each answer in simplest form.

7.  $\frac{1}{2} + \frac{2}{3}$   
\_\_\_\_\_

8.  $\frac{1}{2} - \frac{1}{4}$   
\_\_\_\_\_

9.  $\frac{3}{4} - \frac{2}{3}$   
\_\_\_\_\_

10.  $\frac{2}{5} - \frac{1}{10}$   
\_\_\_\_\_

11.  $\frac{1}{6} + \frac{1}{3}$   
\_\_\_\_\_

12.  $\frac{1}{5} + \frac{7}{10}$   
\_\_\_\_\_

13.  $\frac{5}{8} - \frac{1}{4}$   
\_\_\_\_\_

14.  $\frac{1}{5} + \frac{1}{4}$   
\_\_\_\_\_

15.  $\frac{1}{2} - \frac{3}{8}$   
\_\_\_\_\_

16.  $\frac{2}{7} - \frac{1}{14}$   
\_\_\_\_\_

17.  $\frac{3}{5} + \frac{1}{15}$   
\_\_\_\_\_

18.  $\frac{5}{6} + \frac{1}{2}$   
\_\_\_\_\_

19. Alice practices the piano  $\frac{3}{4}$  hour every day. Today, however, she practiced for  $\frac{1}{2}$  hour longer than usual. How long did Alice practice the piano today?

\_\_\_\_\_

20. One lap around the school's track is  $\frac{1}{4}$  mile. Tyler ran two times around the track. Then he ran  $\frac{5}{6}$  mile home. How far did Tyler run in all?

\_\_\_\_\_

**LESSON Practice A**

**5-2 Adding and Subtracting with Unlike Denominators**

Write the least common denominator for each pair of fractions.

1.  $\frac{1}{2}, \frac{2}{4}$       2.  $\frac{1}{8}, \frac{2}{3}$       3.  $\frac{1}{6}, \frac{1}{4}$

4.  $\frac{1}{3}, \frac{1}{5}$       5.  $\frac{1}{5}, \frac{3}{4}$       6.  $\frac{1}{5}, \frac{7}{10}$

15      20      10

Add or subtract. Write each answer in simplest form.

7.  $\frac{1}{2} + \frac{2}{3}$       8.  $\frac{1}{2} - \frac{1}{4}$       9.  $\frac{3}{4} - \frac{2}{3}$

10.  $\frac{2}{5} - \frac{1}{10}$       11.  $\frac{1}{6} + \frac{1}{3}$       12.  $\frac{1}{5} + \frac{7}{10}$

13.  $\frac{5}{8} - \frac{1}{4}$       14.  $\frac{1}{5} + \frac{1}{4}$       15.  $\frac{1}{2} - \frac{3}{8}$

16.  $\frac{2}{7} - \frac{1}{14}$       17.  $\frac{3}{5} + \frac{1}{15}$       18.  $\frac{5}{6} + \frac{1}{2}$

19. Alice practices the piano  $\frac{3}{4}$  hour every day. Today, however, she practiced for  $\frac{1}{2}$  hour longer than usual. How long did Alice practice the piano today?

$1\frac{1}{4}$  hours

20. One lap around the school's track is  $\frac{1}{4}$  mile. Tyler ran two times around the track. Then he ran  $\frac{5}{6}$  mile home. How far did Tyler run in all?

$1\frac{1}{3}$  miles

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**LESSON Practice B**

**5-2 Adding and Subtracting with Unlike Denominators**

Add or subtract. Write each answer in simplest form.

1.  $\frac{6}{7} + \frac{1}{3}$       2.  $\frac{3}{7} - \frac{2}{5}$       3.  $\frac{1}{4} + \frac{3}{8}$

4.  $\frac{7}{8} - \frac{2}{3}$       5.  $\frac{1}{6} + \frac{3}{5}$       6.  $\frac{5}{6} - \frac{2}{3}$

7.  $\frac{5}{9} - \frac{1}{3}$       8.  $\frac{7}{8} + \frac{3}{4}$       9.  $\frac{5}{12} - \frac{1}{6}$

10.  $\frac{4}{5} - \frac{7}{11}$       11.  $\frac{4}{9} + \frac{5}{6}$       12.  $\frac{5}{8} + \frac{2}{3}$

Evaluate each expression for  $b = \frac{1}{3}$ . Write your answer in simplest form.

13.  $b + \frac{5}{8}$       14.  $\frac{7}{9} - b$       15.  $\frac{2}{7} + b$

16.  $b + b$       17.  $\frac{11}{12} - b$       18.  $\frac{3}{4} - b$

19. There are three grades in Kyle's middle school—sixth, seventh, and eighth. One-third of the students are in sixth grade and  $\frac{1}{4}$  are in seventh grade. What fraction of the schools' students are in eighth grade?

$\frac{5}{12}$  of the students

20. Sarah is making a dessert that calls for  $\frac{4}{5}$  cup of crushed cookies. If she has already crushed  $\frac{7}{10}$  cup, how much more does she need?

$\frac{1}{10}$  cup

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**LESSON Practice C**

**5-2 Adding and Subtracting with Unlike Denominators**

Evaluate. Write each answer in simplest form.

1.  $\frac{11}{12} + \frac{3}{5}$       2.  $\frac{7}{12} - \frac{5}{16}$       3.  $\frac{5}{6} + \frac{3}{10}$

4.  $\frac{3}{4} - \frac{3}{14}$       5.  $\frac{1}{2} + \frac{5}{17}$       6.  $\frac{4}{5} - \frac{2}{9}$

7.  $\frac{7}{8} - \frac{5}{12}$       8.  $\frac{3}{16} + \frac{5}{6}$       9.  $\frac{3}{16} + \frac{5}{32}$

10.  $\frac{11}{12} - \frac{4}{9} + \frac{1}{2}$       11.  $\frac{2}{15} + \frac{7}{25} - \frac{2}{5}$       12.  $\frac{3}{14} - \frac{1}{8} + \frac{4}{7}$

Evaluate each expression for  $b = \frac{2}{5}$ . Write your answer in simplest form.

13.  $b + \frac{9}{14}$       14.  $\frac{7}{12} - b$       15.  $\frac{11}{16} - b$

16.  $b + \frac{8}{11}$       17.  $\frac{4}{7} - b$       18.  $\frac{14}{15} + b$

19. Ben, Shaneeka, and Phil live on the same street. Ben lives  $\frac{6}{11}$  mile north of Phil, and  $\frac{1}{3}$  mile north of Shaneeka. How far does Shaneeka live from Phil?

$\frac{7}{33}$  of a mile

20. At the frog-jumping contest, Trevor's frog jumped  $\frac{5}{6}$  foot and then  $\frac{5}{9}$  foot. Mei's frog jumped  $\frac{4}{5}$  foot and then  $\frac{1}{2}$  foot. Whose frog jumped the farthest in all? How much farther?

Trevor's frog;  $\frac{4}{45}$  foot farther

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**LESSON Reteach**

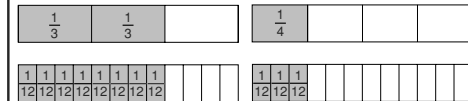
**5-2 Adding and Subtracting with Unlike Denominators**

Unlike fractions have different denominators. To add and subtract fractions, you must have a common denominator. The least common denominator (LCD) is the least common multiple of the denominators.

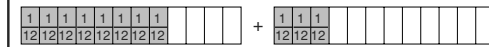
To add or subtract unlike fractions, first find the LCD of the fractions.

$\frac{2}{3} + \frac{1}{4}$   
 Multiples of 4: 4, 8, 12, ...  
 Multiples of 3: 3, 6, 9, 12, ...  
 The LCD is 12.

Next, use fraction strips to find equivalent fractions.



Then use fraction strips to find the sum or difference.



$\frac{8}{12} + \frac{3}{12} = \frac{11}{12}$   
 So,  $\frac{2}{3} + \frac{1}{4} = \frac{11}{12}$ .

Use fraction strips to find each sum or difference. Write your answer in simplest form.

1.  $\frac{1}{4} + \frac{1}{8}$       2.  $\frac{5}{6} - \frac{2}{3}$       3.  $\frac{3}{4} - \frac{1}{3}$       4.  $\frac{3}{5} + \frac{3}{10}$

5.  $\frac{3}{4} + \frac{1}{6}$       6.  $\frac{1}{2} + \frac{3}{8}$       7.  $\frac{2}{3} - \frac{1}{6}$       8.  $\frac{1}{3} - \frac{1}{4}$

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