

Name

CAMPUS COMMUNITY SUMMER PACKET

THE PACKET IS DUE DURING THE SECOND WEEK OF SCHOOL. ALL QUESTIONS MUST BE ANSWERED AND ALL WORK MUST BE SHOWN TO RECEIVE CREDIT.

STUDENTS WHO DO NOT COMPLETE THE PACKET WILL BE REQUIRED TO REMAIN AFTER SCHOOL ON SELECTED DAYS TO COMPLETE THE PACKET.

## One-Step Equations

**Solve each equation.**

1)  $26 = 8 + v$

2)  $3 + p = 8$

3)  $15 + b = 23$

4)  $-15 + n = -9$

5)  $m + 4 = -12$

6)  $x - 7 = 13$

7)  $m - 9 = -13$

8)  $p - 6 = -5$

9)  $v - 15 = -27$

10)  $n + 16 = 9$

11)  $-104 = 8x$

12)  $14b = -56$

13)  $-6 = \frac{b}{18}$

14)  $10n = 40$

$$15) \frac{v}{8} = 2$$

$$16) 16 = \frac{k}{11}$$

$$17) -15x = 0$$

$$18) -17x = -204$$

$$19) 21 = -7n$$

$$20) \frac{m}{4} = -13$$

$$21) -126 = 14k$$

$$22) -143 = -11x$$

$$23) -16 + x = -15$$

$$24) -5 = \frac{a}{18}$$

$$25) -17 = x - 15$$

$$26) n - 8 = -10$$

$$27) \frac{v}{7} = 8$$

$$28) a + 11 = 20$$

$$29) -7 + m = 8$$

$$30) 18 + m = 8$$

## Multiplying Mixed Numbers

Change mixed numbers into improper fractions then multiply as before.

$$\text{Ex. 1: } 2\frac{1}{2} \times 3\frac{1}{3} = \frac{5}{2} \times \frac{10}{3} = \frac{25}{3} = 8\frac{1}{3}$$

Change the mixed numbers to improper fractions by:

$$2\frac{1}{2} = \frac{2 \times 2 + 1}{2} = \frac{4 + 1}{2} = \frac{5}{2}$$

1) multiplying the bottom number by the whole number  
2) add the top number  
3) keep the bottom number.

Cancel top and bottom. Multiply. Improper fractions simplify by dividing.

Ex.2:  $4\frac{1}{4} \times 6 = \frac{17}{2} \times \frac{6}{1} = \frac{51}{2} = 25\frac{1}{2}$  Change the mixed number into an improper fraction. Change the whole number into an improper fraction. Cancel. Multiply. Simplify to get the quotient.

Exercise 2 (answers on page 40)

Multiply these fractions. Cancel and simplify if necessary.

1.  $1\frac{1}{2} \times 1\frac{3}{4} =$

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

3.  $4\frac{1}{3} \times 1\frac{7}{8} =$

4.  $\frac{1}{2} \times 2\frac{1}{8} =$

5.  $3\frac{1}{4} \times \frac{7}{8} =$

6.  $5\frac{5}{7} \times \frac{14}{15} =$

7.  $7 \times 1\frac{3}{8} =$

8.  $2\frac{4}{5} \times 5 =$

9.  $6\frac{2}{3} \times 9 =$

10.  $1\frac{8}{9} \times 1\frac{5}{6} =$

11.  $7\frac{1}{7} \times 8\frac{2}{5} =$

12.  $1\frac{1}{7} \times 9\frac{1}{3} =$

Exercise 1 (answers on page 40)

Multiply these fractions. Cancel and simplify if possible.

1.  $\frac{1}{8} \times \frac{2}{3} =$

2.  $\frac{1}{2} \times \frac{4}{5} =$

3.  $\frac{3}{5} \times \frac{10}{11} =$

4.  $\frac{8}{9} \times \frac{3}{4} =$

5.  $\frac{7}{10} \times \frac{2}{21} =$

6.  $\frac{3}{4} \times \frac{5}{7} =$

7.  $\frac{5}{9} \times \frac{7}{8} =$

8.  $6 \times \frac{1}{3} =$

9.  $\frac{5}{9} \times 9 =$

10.  $10 \times \frac{1}{2} =$

11.  $\frac{1}{3} \times 12 =$

12.  $\frac{15}{16} \times \frac{8}{10} =$

13.  $\frac{7}{8} \times \frac{12}{13} =$

14.  $\frac{6}{9} \times \frac{1}{3} =$

15.  $\frac{5}{10} \times \frac{3}{4} =$

16.  $\frac{16}{17} \times \frac{23}{24} =$

17.  $\frac{5}{16} \times \frac{20}{30} =$

18.  $\frac{9}{10} \times \frac{50}{100} =$

## Dividing Mixed Number Fractions

When dividing mixed numbers, change the mixed numbers to improper fractions, invert the fraction on the right of the  $\div$  symbol, cancel if possible, multiply then simplify.

$$\text{Ex. 1: } 2\frac{1}{2} \div 1\frac{1}{3} = \frac{5}{2} \div \frac{4}{3} = \frac{5}{2} \times \frac{3}{4} = \frac{15}{8} = 1\frac{7}{8}$$

$$\text{Ex. 2: } 4\frac{1}{2} \div 6 = \frac{9}{2} \div \frac{6}{1} = \frac{9}{2} \times \frac{1}{6} = \frac{3}{2}$$

### Exercise 4 (answers on page 40)

Divide the following mixed numbers. Cancel and simplify when possible.

$$1. \quad 2\frac{3}{4} \div 1\frac{1}{8} =$$

$$2. \quad 3\frac{1}{2} \div 1\frac{1}{8} =$$

$$3. \quad 5\frac{2}{5} \div 1\frac{9}{10} =$$

$$4. \quad \frac{3}{4} \div 2\frac{1}{3} =$$

$$5. \quad 6\frac{4}{5} \div \frac{1}{2} =$$

$$6. \quad 8\frac{1}{3} \div \frac{5}{6} =$$

$$7. \quad 8 \div 1\frac{5}{6} =$$

$$8. \quad 3\frac{6}{7} \div 2 =$$

$$9. \quad 5\frac{7}{8} \div 4 =$$

$$10. \quad 3\frac{3}{7} \div 3\frac{3}{7} =$$

$$11. \quad 2\frac{1}{2} \div 1\frac{1}{2} =$$

$$12. \quad 16\frac{2}{3} \div 13\frac{1}{6} =$$

Exercise 5 (answers on page 40)

Solve the following fraction word problems. Cancel and simplify your answers.

1. A stack of boards is 21 inches high. Each board is  $1\frac{3}{4}$  inches thick. How many boards are there?
2. A satellite makes 4 revolutions of the earth in one day. How many revolutions would it make in  $6\frac{1}{2}$  days?
3. A bolt has  $16\frac{1}{2}$  turns per inch. How many turns would be in  $2\frac{1}{2}$  inches of threads?
4. If a bookshelf is  $28\frac{1}{8}$  inches long, how many  $1\frac{7}{8}$  inch thick books will it hold?
5. Deborah needs to make 16 costumes for the school play. Each costume requires  $2\frac{1}{4}$  yards of material. How many yards of material will she need?

6. The Coffee Pub has cans of coffee that weigh  $3\frac{1}{4}$  pounds each. The Pub has  $8\frac{1}{2}$  cans of coffee left. What is the total weight of  $8\frac{1}{2}$  cans?
7. Belinda baked 9 pies that weigh  $20\frac{1}{4}$  pounds total. How much does each pie weigh?
8. A piece of paper is  $\frac{4}{1000}$  inches thick. How many sheets of paper will it take to make a stack 1 inch high?
9. Tanya has read  $\frac{3}{4}$  of a book, which is 390 pages. How many pages are in the entire book?
10. DJ Gabe is going to serve  $\frac{1}{3}$  of a whole pizza to each guest at his party. If he expects 24 guests, how many pizzas will he need?



Ex. 2:  $\frac{1}{5} + \frac{1}{6}$

Step 1: 6 is the largest denominator

Step 2: 6 divided by 5 has a remainder.

Multiply  $6 \times 2 = 12$ .

12 divided by 5 has a remainder

$6 \times 3 = 18$ .

18 divided by 5 has a remainder

$6 \times 4 = 24$

24 divided by 5 has a remainder

$6 \times 5 = 30$

30 divided by 5 has NO remainder, therefore 30 is the LCD!

**Note:** You may have noticed that multiplying the denominators together also gets the LCD. This method will always get a common denominator but it may not get a lowest common denominator.

Exercise 1 (answers on page 41)

Using the previously shown method, write just the LCD for the following sets of fractions (**Do Not Solve**)

1)  $\frac{1}{2}, \frac{1}{3}$

2)  $\frac{2}{5}, \frac{2}{3}$

3)  $\frac{5}{8}, \frac{1}{2}$

4)  $\frac{1}{4}, \frac{1}{3}$

5)  $\frac{1}{7}, \frac{2}{5}$

6)  $\frac{4}{9}, \frac{1}{3}$

7)  $\frac{3}{4}, \frac{1}{2}$

8)  $\frac{7}{8}, \frac{3}{5}$

9)  $\frac{3}{10}, \frac{2}{3}$

10)  $\frac{13}{15}, \frac{4}{5}$

11)  $\frac{1}{2}, \frac{2}{3}, \frac{5}{6}$

12)  $\frac{3}{4}, \frac{5}{8}, \frac{7}{16}$

13)  $\frac{3}{8}, \frac{1}{6}, \frac{1}{3}$

14)  $\frac{1}{7}, \frac{1}{2}, \frac{1}{3}$

15)  $\frac{3}{8}, \frac{1}{5}, \frac{1}{3}$

Exercise 2 (answers on page 41)

Find the number that belongs in the space by **building** or **reducing** equivalent fractions.

1)  $\frac{1}{2} = \frac{\quad}{10}$

2)  $\frac{2}{3} = \frac{\quad}{15}$

3)  $\frac{5}{6} = \frac{\quad}{12}$

4)  $\frac{3}{4} = \frac{\quad}{12}$

5)  $\frac{2}{5} = \frac{\quad}{20}$

6)  $\frac{5}{7} = \frac{\quad}{21}$

7)  $\frac{3}{6} = \frac{\quad}{2}$

8)  $\frac{6}{8} = \frac{\quad}{4}$

9)  $\frac{8}{10} = \frac{\quad}{5}$

10)  $\frac{12}{24} = \frac{\quad}{2}$

11)  $\frac{5}{30} = \frac{\quad}{6}$

12)  $\frac{7}{14} = \frac{\quad}{2}$

13)  $\frac{2}{7} = \frac{\quad}{35}$

14)  $\frac{7}{42} = \frac{\quad}{6}$

15)  $\frac{10}{15} = \frac{\quad}{3}$

16)  $\frac{1}{8} = \frac{\quad}{24}$

17)  $\frac{1}{3} = \frac{\quad}{24}$

18)  $\frac{20}{22} = \frac{\quad}{11}$

19)  $\frac{21}{42} = \frac{\quad}{2}$

20)  $\frac{17}{51} = \frac{\quad}{3}$

21)  $\frac{10}{30} = \frac{\quad}{3}$

Exercise 4 (answers on page 41)

Add or subtract the following fractions. Simplify and reduce when possible.

1)  $\frac{2}{7} + \frac{3}{7} =$

2)  $\frac{9}{14} + \frac{1}{14} =$

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

4)  $\frac{3}{5} + \frac{1}{4} =$

5)  $\frac{2}{3} + \frac{1}{2} =$

6)  $\frac{4}{5} + \frac{1}{2} =$

7)  $\frac{2}{4} + \frac{3}{6} =$

8)  $\frac{5}{6} + \frac{3}{8} =$

9)  $\frac{7}{9} + \frac{2}{3} =$

10)  $\frac{3}{4} - \frac{1}{2} =$

11)  $\frac{3}{5} - \frac{1}{3} =$

12)  $\frac{7}{8} - \frac{2}{3} =$

13)  $\frac{5}{12} - \frac{1}{4} =$

14)  $\frac{9}{11} - \frac{1}{2} =$

15)  $\frac{11}{12} - \frac{5}{6} =$

16)  $\frac{1}{2} - \frac{1}{3} =$

17)  $\frac{5}{6} - \frac{1}{4} =$

18)  $\frac{9}{10} - \frac{1}{3} =$

19)  $\frac{8}{20} + \frac{1}{5} =$

20)  $\frac{14}{15} - \frac{1}{6} =$

21)  $\frac{4}{7} - \frac{3}{8} =$

22)  $\frac{6}{12} + \frac{1}{2} =$

23)  $\frac{8}{9} - \frac{2}{3} =$

24)  $\frac{12}{16} + \frac{5}{8} =$

25)  $\frac{3}{7} - \frac{1}{6} =$

26)  $\frac{4}{5} - \frac{6}{10} =$

27)  $\frac{2}{13} + \frac{2}{3} =$

**Exercise 5 (answers on page 41)**

Add or subtract the following mixed numbers. Simplify and reduce when possible.

$$1) 8\frac{4}{5} + 8\frac{1}{10} =$$

$$2) 1\frac{2}{3} + \frac{3}{7} =$$

$$3) 16\frac{5}{8} + \frac{11}{12} =$$

$$4) 3\frac{4}{5} + 6\frac{2}{3} + 5\frac{11}{15} =$$

$$5) 1\frac{11}{12} - \frac{2}{3} =$$

$$6) 4\frac{1}{8} - 1 =$$

$$7) 5\frac{1}{6} - 2\frac{1}{3} =$$

$$8) 14\frac{1}{2} - 2\frac{1}{8} =$$

$$9) 7\frac{2}{5} + 1\frac{1}{5} =$$

$$10) 2\frac{2}{3} - \frac{1}{4} =$$

$$11) 12\frac{1}{7} - 8\frac{2}{3} =$$

$$12) 4\frac{4}{7} - 3\frac{6}{7} =$$

$$13) 16\frac{5}{6} - 2\frac{1}{3} =$$

$$14) 14 - 2\frac{1}{9} =$$

$$15) 146 + 8\frac{1}{5} =$$

$$16) 5\frac{5}{6} + \frac{10}{12} =$$

$$17) 6 - 4\frac{7}{8} =$$

$$18) 11\frac{3}{5} - 5 =$$

$$19) \frac{2}{3} + 7 =$$

$$20) 2\frac{4}{8} + 1\frac{2}{3} =$$

$$21) 100 - 4\frac{3}{8} =$$

Exercise 6 (answers on page 41)

Solve the following add/subtract fraction word problems

1. Find the total width of 3 boards that  $1\frac{3}{4}$  inches wide,  $\frac{7}{8}$  inch wide, and  $1\frac{1}{2}$  inches wide.
2. A 7.15H tire is  $6\frac{5}{8}$  inches wide and a 7.15C tire is  $4\frac{3}{4}$  inches wide. What is the difference in their widths?
3. A patient is given  $1\frac{1}{2}$  teaspoons of medicine in the morning and  $2\frac{1}{4}$  teaspoons at night. How many teaspoons total does the patient receive daily?
4.  $3\frac{1}{3}$  feet are cut off a board that is  $12\frac{1}{4}$  feet long. How long is the remaining part of the board?
5.  $\frac{3}{8}$  of the corn in the U.S. is grown in Iowa.  $\frac{1}{4}$  of it is grown in Nebraska. How much of the corn supply is grown in the two states?

6. A runner jogs  $7\frac{1}{5}$  miles east,  $5\frac{1}{4}$  miles south, and  $8\frac{2}{3}$  miles west.  
How far has she jogged?

7. If  $3\frac{1}{2}$  ounce of cough syrup is used from a  $9\frac{1}{4}$  ounce bottle, how much is left?

8. I set a goal to drink 64 ounces of water a day. If I drink  $10\frac{1}{3}$  ounces in the morning,  $15\frac{1}{2}$  ounces at noon, and  $20\frac{5}{6}$  ounces at dinner, how many more ounces of water do I have to drink to reach my goal for the day?

9. Three sides of parking lot are measured to the following lengths:  
 $108\frac{1}{4}$  feet,  $162\frac{3}{8}$  feet, and  $143\frac{1}{2}$  feet. If the distance around the lot is  $518\frac{15}{16}$  feet, find the fourth side.

10. Gabriel wants to make five banners for the parade. He has 75 feet of material. The size of four of the banners are:  $12\frac{1}{3}$  ft.,  $16\frac{1}{6}$  ft.,  $11\frac{3}{4}$  ft., and  $14\frac{1}{2}$  ft. How much material is left for the fifth banner?

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Fractions Worksheet

Simplify the following fractions.

1 a.  $\frac{15}{55}$

1 b.  $\frac{20}{48}$

1 c.  $\frac{4}{12}$

2 a.  $\frac{9}{60}$

2 b.  $\frac{16}{56}$

2 c.  $\frac{18}{60}$

3 a.  $\frac{13}{39}$

3 b.  $\frac{12}{18}$

3 c.  $\frac{15}{51}$

4 a.  $\frac{3}{12}$

4 b.  $\frac{8}{10}$

4 c.  $\frac{4}{12}$

5 a.  $\frac{5}{5}$

5 b.  $\frac{12}{20}$

5 c.  $\frac{20}{30}$

6 a.  $\frac{4}{54}$

6 b.  $\frac{16}{44}$

6 c.  $\frac{4}{16}$

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Answer Key

1 a.  $\frac{3}{11}$

1 b.  $\frac{5}{12}$

1 c.  $\frac{1}{3}$

2 a.  $\frac{3}{20}$

2 b.  $\frac{2}{7}$

2 c.  $\frac{3}{10}$

3 a.  $\frac{1}{3}$

3 b.  $\frac{2}{3}$

3 c.  $\frac{5}{17}$

4 a.  $\frac{1}{4}$

4 b.  $\frac{4}{5}$

4 c.  $\frac{1}{3}$

5 a.  $\frac{1}{1}$

5 b.  $\frac{3}{5}$

5 c.  $\frac{2}{3}$

6 a.  $\frac{2}{27}$

6 b.  $\frac{4}{11}$

6 c.  $\frac{1}{4}$