

Name \_\_\_\_\_

# Whole Number Addition



## Learn

**What Can I Do?**  
I want to find the sum of 317 and 806.

**Add from right to left.**

Line up the ones digits, the tens digits, and the hundreds digits. Then add from right to left. Regroup each column, if needed.

1. Add the ones.

$$\begin{array}{r} \downarrow 1 \\ 317 \\ + 806 \\ \hline 3 \end{array}$$

2. Add the tens.

$$\begin{array}{r} \downarrow 1 \\ 317 \\ + 806 \\ \hline 23 \end{array}$$

3. Add the hundreds.

$$\begin{array}{r} \downarrow 1 \\ 317 \\ + 806 \\ \hline 1,123 \end{array}$$

## Try It Add.

1.  $45 + 17$

$$\begin{array}{r} 45 \\ + 17 \\ \hline 62 \end{array}$$

2.  $345 + 519$

$$\begin{array}{r} 345 \\ + 519 \\ \hline 864 \end{array}$$

3.  $630 + 322$

$$\begin{array}{r} 630 \\ + 322 \\ \hline 952 \end{array}$$

## Power Practice Rewrite problems on another paper. Add.

4.  $64 + 32 = \underline{96}$

$$\begin{array}{r} 64 \\ + 32 \\ \hline 96 \end{array}$$

5.  $85 + 37 = \underline{122}$

$$\begin{array}{r} 85 \\ + 37 \\ \hline 122 \end{array}$$

6.  $426 + 358 = \underline{784}$

$$\begin{array}{r} 426 \\ + 358 \\ \hline 784 \end{array}$$

7.  $379 + 246 = \underline{625}$

$$\begin{array}{r} 379 \\ + 246 \\ \hline 625 \end{array}$$

8.  $365 + 483 = \underline{848}$

$$\begin{array}{r} 365 \\ + 483 \\ \hline 848 \end{array}$$

9.  $271 + 396 = \underline{667}$

$$\begin{array}{r} 271 \\ + 396 \\ \hline 667 \end{array}$$

10.  $109 + 850 = \underline{959}$

$$\begin{array}{r} 109 \\ + 850 \\ \hline 959 \end{array}$$

11.  $211 + 489 = \underline{700}$

$$\begin{array}{r} 211 \\ + 489 \\ \hline 700 \end{array}$$

## Adding Whole Numbers

## Learn

## What Can I Do?

I want to add three or more addends.



$$\text{Add. } 608 + 5,754 + 809 + 83 = ?$$

## Use These Steps

Write the numbers in a column. Line up the digits that are in the same place. Add, beginning with the ones column.

$$\begin{array}{r} \phantom{2} \phantom{1} \phantom{2} \\ 608 \\ 5,754 \\ 809 \\ + 83 \\ \hline 7,254 \end{array}$$

Remember to regroup when necessary, before adding the numbers in the next place.

$$\text{So, } 608 + 5,754 + 809 + 83 = 7,254$$

## Try It

• Complete each addition.

$$\begin{array}{r} \phantom{1} \phantom{2} \\ 1. \quad 408 \\ \phantom{1} \phantom{2} \\ 60 \\ \phantom{1} \phantom{2} \\ 155 \\ + 2,047 \\ \hline 2,670 \end{array}$$

$$\begin{array}{r} \phantom{2} \phantom{2} \phantom{1} \\ 2. \quad 5,634 \\ \phantom{2} \phantom{2} \phantom{1} \\ 1,866 \\ \phantom{2} \phantom{2} \phantom{1} \\ 93 \\ + 551 \\ \hline 8,144 \end{array}$$

$$\begin{array}{r} \phantom{1} \phantom{1} \phantom{2} \\ 3. \quad 39 \\ \phantom{1} \phantom{1} \phantom{2} \\ 7,143 \\ \phantom{1} \phantom{1} \phantom{2} \\ 908 \\ + 2,641 \\ \hline 10,731 \end{array}$$

$$\begin{array}{r} \phantom{2} \phantom{1} \\ 4. \quad 4,683 \\ \phantom{2} \phantom{1} \\ 5,135 \\ \phantom{2} \phantom{1} \\ 1,004 \\ + 4,095 \\ \hline 14,917 \end{array}$$

## Power Practice

• Find each sum.

$$5. 95 + 804 + 82 = \underline{981}$$

$$6. 382 + 660 + 85 + 2,345 = \underline{3,472}$$

$$7. 3,523 + 747 + 109 + 96 = \underline{4,475} \quad 8. 515 + 4,629 + 2,432 + 87 = \underline{7,663}$$

$$9. 6,988 + 1,954 + 803 + 5,512 + 444 = \underline{15,701}$$

$$10. 77 + 3,190 + 6,840 + 903 + 5,662 = \underline{16,672}$$

$$11. 205 + 584 + 2,387 + 68 + 7,346 = \underline{10,590}$$

$$12. 3,095 + 3,905 + 359 + 395 + 5,955 = \underline{13,709}$$

# Subtracting Whole Numbers

## Learn

### What Can I Do?

I want to subtract whole numbers.



Subtract.  $6,402 - 876 = ?$

### Use These Steps

Write the numbers in a column. Line up the digits that are in the same place. Subtract, beginning with the ones column.

$$\begin{array}{r}
 \phantom{6}^9 \phantom{0}^{13} \\
 \phantom{6}^5 \phantom{0}^{10} \phantom{0}^{10} \phantom{2}^{12} \\
 \cancel{6},\cancel{0}\cancel{4}2 \\
 - \phantom{6}876 \\
 \hline
 5,166
 \end{array}$$

Remember to regroup when necessary, before subtracting.

So,  $6,402 - 876 = 5,166$

## Try It • Complete the subtraction.

$$\begin{array}{r}
 \phantom{1}^3 \phantom{0}^{10} \\
 \cancel{4}08 \\
 - \phantom{4}64 \\
 \hline
 344
 \end{array}$$

$$\begin{array}{r}
 \phantom{3}^3 \phantom{1}^{15} \\
 \cancel{6}45 \\
 - \phantom{6}429 \\
 \hline
 216
 \end{array}$$

$$\begin{array}{r}
 \phantom{2}^{10} \\
 \phantom{2}^1 \phantom{1}^{011} \\
 \cancel{2},\cancel{1}19 \\
 - \phantom{2}987 \\
 \hline
 1132
 \end{array}$$

$$\begin{array}{r}
 \phantom{4}^{12} \phantom{9}^9 \\
 \phantom{4}^3 \phantom{2}^{210} \phantom{2}^{12} \\
 \cancel{4},\cancel{3}02 \\
 - \phantom{4}3,945 \\
 \hline
 357
 \end{array}$$

## Power Practice • Find each difference.

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$$\begin{array}{r}
 8140 \\
 \cancel{4}50 \\
 - 78 \\
 \hline
 8062
 \end{array}$$

5.  $950 - 78 = 872$

$$\begin{array}{r}
 414 \\
 - 386 \\
 \hline
 28
 \end{array}$$

6.  $414 - 386 = 28$

7.  $732 - 581 = 151$

$$\begin{array}{r}
 2872 \\
 \cancel{8}72 \\
 - 875 \\
 \hline
 2000
 \end{array}$$

8.  $3,149 - 875 = 2274$

$$\begin{array}{r}
 8047 \\
 - 5897 \\
 \hline
 2150
 \end{array}$$

9.  $8,047 - 5,897 = 2150$

10.  $6,324 - 5,849 = 475$

$$\begin{array}{r}
 7002 \\
 - 583 \\
 \hline
 6419
 \end{array}$$

11.  $7,002 - 583 = 6419$

$$\begin{array}{r}
 4513 \\
 - 686 \\
 \hline
 3827
 \end{array}$$

12.  $4,513 - 686 = 3827$

13.  $2,301 - 1,743 = 558$

$$\begin{array}{r}
 9432 \\
 - 87 \\
 \hline
 9345
 \end{array}$$

14.  $9,432 - 87 = 9345$

$$\begin{array}{r}
 6315 \\
 - 5908 \\
 \hline
 407
 \end{array}$$

15.  $6,315 - 5,908 = 407$

$$\begin{array}{r}
 8920 \\
 - 7945 \\
 \hline
 975
 \end{array}$$

# Multiplying Whole Numbers

## Skill Builder



### Learn

#### 1-Digit Multiplier

$$3 \times 438 = ?$$

Multiply each place in the other factor by the multiplier. Begin with the ones place.

$$\begin{array}{r} 12 \\ 438 \\ \times 3 \\ \hline 1,314 \end{array}$$

Remember to regroup when necessary, before multiplying the numbers in the next place.

So,  $3 \times 438 = 1,314$ .

#### 2-Digit Multiplier

$$46 \times 36 = ?$$

Multiply each place in the other factor by the ones digit of the multiplier

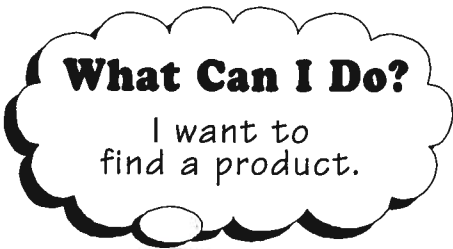
$$\begin{array}{r} 1 \\ 36 \\ \times 42 \\ \hline 72 \end{array}$$

Remember to regroup when necessary.

Multiply each place in the other factor by the tens digit of the multiplier. Then add both products

$$\begin{array}{r} 2 \\ 1 \\ 36 \\ \times 42 \\ \hline 72 \\ +1,440 \\ \hline 1,512 \end{array}$$

THINK:  
144 tens = 1,440.  
Remember the 0 in the ones place.  
So,  $42 \times 36 = 1,512$ .



### Try It

• Complete the multiplication.

$$\begin{array}{r} 2 \\ 1. \quad 352 \\ \times 4 \\ \hline 1408 \end{array}$$

$$\begin{array}{r} 15 \\ 2. \quad 719 \\ \times 6 \\ \hline 4314 \end{array}$$

$$\begin{array}{r} 1 \\ 2 \\ 3. \quad 85 \\ \times 24 \\ \hline 340 \\ 1700 \\ \hline 2040 \end{array}$$

$$\begin{array}{r} 5 \\ 7 \\ 4. \quad 59 \\ \times 63 \\ \hline 177 \\ 3540 \\ \hline 3717 \end{array}$$

$$\begin{array}{r} 82 \\ \times 28 \\ \hline 656 \\ 1640 \\ \hline 2296 \end{array}$$

### Power Practice

• Find each product.

$$5. \quad 4 \times 87 = \underline{348}$$

$$6. \quad 6 \times 75 = \underline{450}$$

$$7. \quad 8 \times 46 = \underline{368}$$

$$8. \quad 9 \times 163 = \underline{1467}$$

$$9. \quad 8 \times 628 = \underline{5024}$$

$$10. \quad 4 \times 505 = \underline{2020}$$

$$11. \quad 13 \times 58 = \underline{754}$$

$$12. \quad 95 \times 47 = \underline{4465}$$

$$13. \quad 28 \times 82 = \underline{2296}$$

$$14. \quad 52 \times 31 = \underline{1612}$$

$$15. \quad 14 \times 68 = \underline{952}$$

$$16. \quad 37 \times 77 = \underline{2849}$$

$$\begin{array}{r} 77 \\ \times 37 \\ \hline 539 \\ 2310 \\ \hline 2849 \end{array}$$

$$\begin{array}{r} 95 \\ \times 47 \\ \hline 665 \\ 3800 \\ \hline 4465 \end{array} \quad \begin{array}{r} 68 \\ \times 14 \\ \hline 272 \\ 680 \\ \hline 952 \end{array}$$

Name \_\_\_\_\_

# Dividing by a 1-Digit Number

## Learn

### Use Place Value

You can think of 2,968 as:  
2 thousands + 9 hundreds + 6 tens + 8 ones

### What Can I Do?

I want to divide by a 1-digit number.



$$\begin{array}{r} 7 \\ 4 \overline{)2,968} \\ - 28 \\ \hline 1 \end{array}$$

THINK: You cannot divide 2 thousands by 4.  
Divide 29 *hundreds* by 4.

$$4 \times 7 = 28 \quad 29 - 28 = 1$$

$$\begin{array}{r} 74 \\ 4 \overline{)2,968} \\ - 28 \downarrow \\ \hline 16 \\ - 16 \\ \hline 0 \end{array}$$

THINK: Bring down 6 tens.  
Divide 16 *tens* by 4.

$$4 \times 4 = 16 \quad 16 - 16 = 0$$

$$\begin{array}{r} 742 \\ 4 \overline{)2,968} \\ - 28 \\ \hline 16 \\ - 16 \downarrow \\ \hline 08 \\ - 08 \\ \hline \end{array}$$

THINK: Bring down 8 ones.  
Divide 8 *ones* by 4.

$$4 \times 2 = 8 \quad 8 - 8 = 0 \text{ No Remainder}$$

## Try It

• Complete the division

$$1. \begin{array}{r} 89 \frac{1}{4} \\ 4 \overline{)357} \\ - 32 \\ \hline 37 \\ - 36 \\ \hline 1 \end{array}$$

$$2. \begin{array}{r} 309 \frac{2}{3} \\ 3 \overline{)929} \\ - 9 \\ \hline 029 \\ - 27 \\ \hline 2 \end{array}$$

$$3. \begin{array}{r} 1,429 \\ 5 \overline{)7,145} \\ - 5 \\ \hline 21 \\ - 20 \\ \hline 14 \\ - 10 \\ \hline 45 \\ - 45 \\ \hline \end{array}$$

$$4. \begin{array}{r} 639 \frac{7}{9} \\ 9 \overline{)5,758} \\ - 54 \\ \hline 35 \\ - 27 \\ \hline 88 \\ - 81 \\ \hline 7 \end{array}$$

Name \_\_\_\_\_

## Power Practice

• Divide. Write the quotient and remainder.

$$\begin{array}{r} 65\frac{2}{3} \\ 3 \overline{)197} \\ \underline{-18} \\ 17 \\ \underline{-15} \\ 2 \end{array}$$

$65\frac{2}{3}$

$$\begin{array}{r} 133 \\ 7 \overline{)931} \\ \underline{-7} \\ 23 \\ \underline{-21} \\ 21 \\ \underline{-21} \\ 0 \end{array}$$

$133$

$$\begin{array}{r} 134 \\ 6 \overline{)804} \\ \underline{-6} \\ 20 \\ \underline{-18} \\ 24 \\ \underline{-24} \\ 0 \end{array}$$

$134$

$$\begin{array}{r} 59\frac{1}{5} \\ 5 \overline{)296} \\ \underline{-29} \\ 46 \\ \underline{-45} \\ 1 \end{array}$$

$59\frac{1}{5}$

$$\begin{array}{r} 238\frac{1}{2} \\ 2 \overline{)4,767} \\ \underline{-4} \\ 76 \\ \underline{-6} \\ 16 \\ \underline{-16} \\ 07 \\ \underline{-07} \\ 0 \end{array}$$

$238\frac{1}{2}$

$$\begin{array}{r} 2378\frac{1}{3} \\ 3 \overline{)7,135} \\ \underline{-6} \\ 11 \\ \underline{-9} \\ 23 \\ \underline{-21} \\ 25 \\ \underline{-24} \\ 1 \end{array}$$

$2378\frac{1}{3}$

$$\begin{array}{r} 1517\frac{3}{4} \\ 4 \overline{)6,071} \\ \underline{-4} \\ 20 \\ \underline{-20} \\ 7 \\ \underline{-7} \\ 31 \\ \underline{-31} \\ 0 \end{array}$$

$1517\frac{3}{4}$

$$\begin{array}{r} 1406\frac{1}{2} \\ 6 \overline{)8,439} \\ \underline{-6} \\ 24 \\ \underline{-24} \\ 39 \\ \underline{-36} \\ 3 \\ \underline{-3} \\ 0 \end{array}$$

$1406\frac{1}{2}$

$$\begin{array}{r} 639 \\ 5 \overline{)3,195} \\ \underline{-30} \\ 19 \\ \underline{-15} \\ 45 \end{array}$$

$639$

$$\begin{array}{r} 540\frac{7}{8} \\ 8 \overline{)4,327} \\ \underline{-40} \\ 32 \\ \underline{-32} \\ 7 \end{array}$$

$540\frac{7}{8}$

$$\begin{array}{r} 716 \\ 9 \overline{)6,444} \\ \underline{-63} \\ 14 \\ \underline{-9} \\ 54 \\ \underline{-54} \\ 0 \end{array}$$

$716$

$$\begin{array}{r} 1004 \\ 5 \overline{)5,020} \\ \underline{-5} \\ 0020 \\ \underline{-20} \\ 0 \end{array}$$

$1004$

$$\begin{array}{r} 1200\frac{5}{7} \\ 7 \overline{)8,405} \\ \underline{-7} \\ 14 \\ \underline{-14} \\ 05 \\ \underline{-05} \\ 0 \end{array}$$

$1200\frac{5}{7}$

$$\begin{array}{r} 812\frac{1}{9} \\ 9 \overline{)7,309} \\ \underline{-72} \\ 10 \\ \underline{-9} \\ 19 \\ \underline{-18} \\ 1 \end{array}$$

$812\frac{1}{9}$

$$\begin{array}{r} 814 \\ 4 \overline{)3,256} \\ \underline{-32} \\ 5 \\ \underline{-4} \\ 16 \\ \underline{-16} \\ 0 \end{array}$$

$814$

$$\begin{array}{r} 666\frac{2}{3} \\ 6 \overline{)4,000} \\ \underline{-36} \\ 40 \\ \underline{-36} \\ 40 \\ \underline{-36} \\ 4 \end{array}$$

$666\frac{2}{3}$

Name \_\_\_\_\_

# Plotting Points on a Coordinate Grid

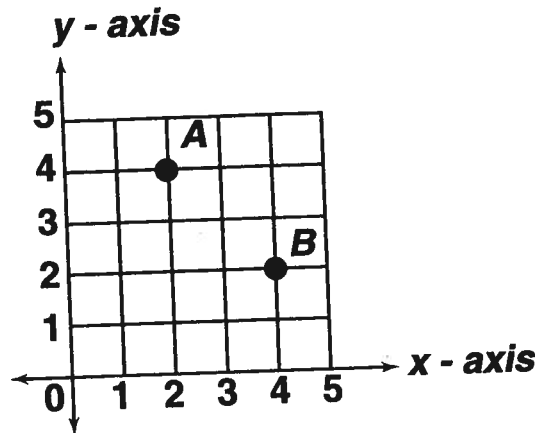
## Learn

### Use a Coordinate Grid

An ordered pair names a point on a grid.

To plot a point, start at the origin (0, 0). The first number in the pair tells you how far to move *across* the x-axis. The second number tells you how far to move *up* the y-axis.

Point A is at (2, 4)  
Point B is at (4, 2).



### What Can I Do?

I want to plot a point for an ordered pair.



## Try It

- Use the ordered pair to complete the sentence. Then plot each point on the grid.

Point F (3,1)

1. To plot point F,

move 3 units across the x-axis,

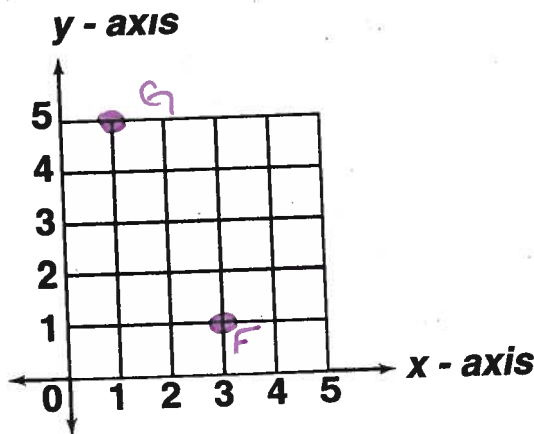
and 1 unit up the y-axis.

Point G (1, 5)

2. To plot point G,

move 1 unit across the x-axis,

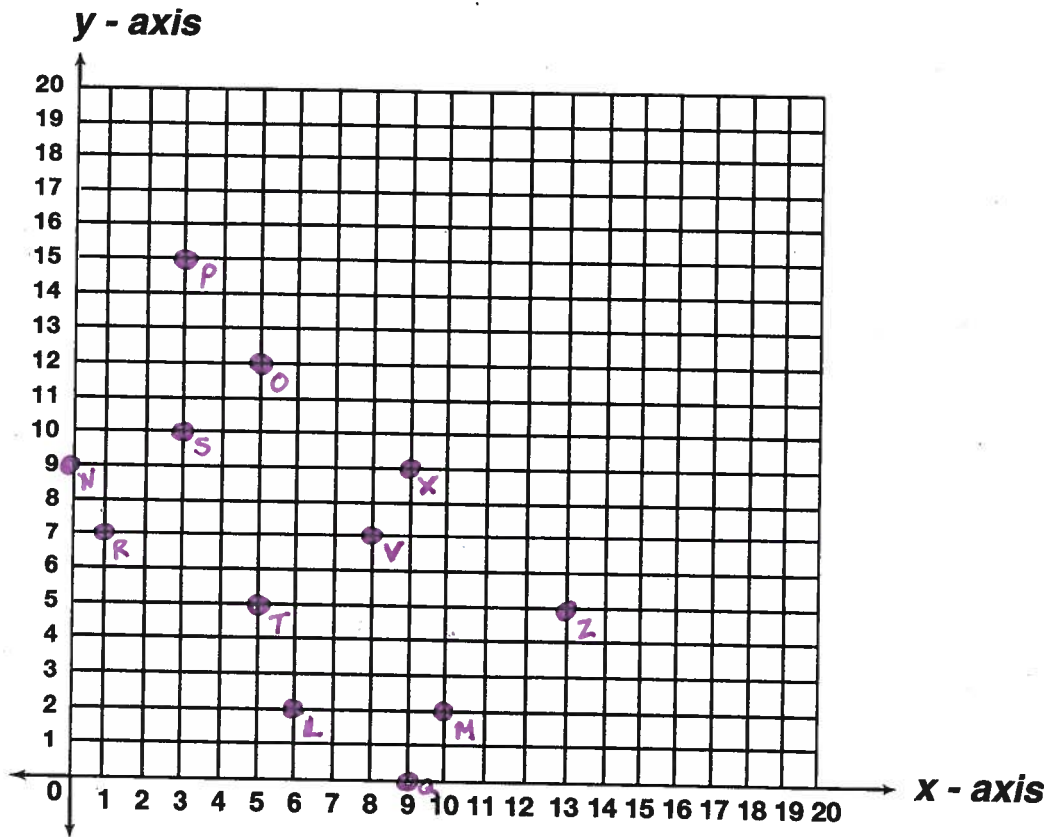
and 5 units up the y-axis.



Name \_\_\_\_\_

## Power Practice • Plot each point.

- |                     |                      |                      |
|---------------------|----------------------|----------------------|
| 3. Point $L(6, 2)$  | 4. Point $M(10, 2)$  | 5. Point $N(0, 9)$   |
| 6. Point $O(5, 12)$ | 7. Point $P(3, 15)$  | 8. Point $Q(9, 0)$   |
| 9. Point $R(1, 7)$  | 10. Point $S(3, 10)$ | 11. Point $T(5, 5)$  |
| 12. Point $V(8, 7)$ | 13. Point $X(9, 9)$  | 14. Point $Z(13, 5)$ |



Answer these questions after plotting all the points named above.

15. What point lies on the x-axis? point Q
16. What point lies on the y-axis? point N
17. Which point is the farthest across the grid? point Z
18. Which point is the highest up the grid? point P



Name \_\_\_\_\_

## Add and Subtract Whole Numbers

### Learn

**What Can I Do?**

I want to add and subtract whole numbers.



Add:  $315 + 126 + 87$

Write the numbers in a column. Line up the digits by place value. Then add, beginning with the ones' column. Regroup each column sum as necessary.

$$\begin{array}{r} 11 \\ 315 \\ 126 \\ + 87 \\ \hline 528 \end{array}$$

Regroup 18 ones as 1 ten 8 ones.

Regroup 12 tens as 1 hundred 2 tens

Subtract:  $2,301 - 135$

Write the numbers in a column. Line up the digits by place value. Then subtract, beginning with the ones' column. You may need to regroup before subtracting.

$$\begin{array}{r} 9 \\ \cancel{10} 11 \\ 2,301 \\ - 135 \\ \hline \end{array}$$

Regroup hundreds as tens, then tens as ones.

$$\begin{array}{r} 9 \\ 2 \cancel{10} 11 \\ 2,301 \\ - 135 \\ \hline 2,166 \end{array}$$

Subtract

**Try It** • Complete to find each sum or difference.

1. 
$$\begin{array}{r} 1 \\ 205 \\ + 127 \\ \hline 332 \end{array}$$

2. 
$$\begin{array}{r} 1016 \\ 316 \\ - 128 \\ \hline 188 \end{array}$$

3. 
$$\begin{array}{r} 1 \\ 416 \\ + 166 \\ \hline 582 \end{array}$$

4. 
$$\begin{array}{r} 1115 \\ 4325 \\ - 426 \\ \hline 99 \end{array}$$

Name \_\_\_\_\_

## Power Practice

• Find each sum or difference.

$$\begin{array}{r} 5. \quad 787 \\ + 309 \\ \hline 1096 \end{array}$$

$$\begin{array}{r} 6. \quad \overset{3}{4} \overset{10}{403} \\ - 221 \\ \hline 182 \end{array}$$

$$\begin{array}{r} 7. \quad 647 \\ + 983 \\ \hline 1630 \end{array}$$

$$\begin{array}{r} 8. \quad 353 \\ + 4,777 \\ \hline 5130 \end{array}$$

$$\begin{array}{r} 9. \quad 487 \\ + 39 \\ \hline 526 \end{array}$$

$$\begin{array}{r} 10. \quad 4,103 \\ - 685 \\ \hline 3418 \end{array}$$

$$\begin{array}{r} 11. \quad 17,842 \\ - 6,397 \\ \hline 11,445 \end{array}$$

$$\begin{array}{r} 12. \quad 12,345 \\ + 67,890 \\ \hline 80,235 \end{array}$$

$$\begin{array}{r} 13. \quad 10,000 \\ - 3,482 \\ \hline 6,518 \end{array}$$

$$\begin{array}{r} 14. \quad 4,759 \\ + 98 \\ \hline 4857 \end{array}$$

$$\begin{array}{r} 15. \quad 849 \\ - 783 \\ \hline 66 \end{array}$$

$$\begin{array}{r} 16. \quad 500 \\ - 377 \\ \hline 123 \end{array}$$

$$17. \quad 3,000 - 188 = \underline{2812} \quad \begin{array}{r} 3,000 \\ - 188 \\ \hline 2812 \end{array}$$

$$18. \quad 13,021 - 7,896 = \underline{5125} \quad \begin{array}{r} 13,021 \\ - 7,896 \\ \hline 5125 \end{array}$$

$$19. \quad 2,788 + 349 = \underline{3,137} \quad \begin{array}{r} 2,788 \\ + 349 \\ \hline 3,137 \end{array}$$

$$20. \quad 11,110 - 379 = \underline{10,731} \quad \begin{array}{r} 11,110 \\ - 379 \\ \hline 10,731 \end{array}$$

$$21. \quad 876 + 549 = \underline{1425} \quad \begin{array}{r} 876 \\ + 549 \\ \hline 1425 \end{array}$$

$$22. \quad 39 + 387 + 84 = \underline{510}$$

$$23. \quad 1,345 + 4,579 = \underline{5924} \quad \begin{array}{r} 1,345 \\ + 4,579 \\ \hline 5924 \end{array}$$

$$24. \quad 5,678 - 1,349 = \underline{4329} \quad \begin{array}{r} 5,678 \\ - 1,349 \\ \hline 4329 \end{array}$$

$$25. \quad 8,999 + 346 = \underline{9345} \quad \begin{array}{r} 8,999 \\ + 346 \\ \hline 9345 \end{array}$$

$$26. \quad 678 - 99 = \underline{579} \quad \begin{array}{r} 678 \\ - 99 \\ \hline 579 \end{array}$$

$$27. \quad 5,765 - 198 = \underline{5567} \quad \begin{array}{r} 5,765 \\ - 198 \\ \hline 5567 \end{array}$$

$$28. \quad 5,609 + 1,189 + 57 = \underline{6855} \quad \begin{array}{r} 5609 \\ 1189 \\ + 57 \\ \hline 6855 \end{array}$$

## Learn with Partners & Parents

### A Close Call

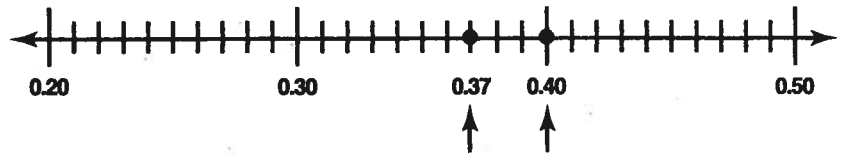
Use three sets of ten index cards numbered 0-9 to make sums as close to 1,000 as possible without going over.

- For the first round, mix up the three sets of cards. Then each player draws 8 cards.
- Each player uses 6 of the 8 cards to make two 3-digit numbers that have a sum as close to 1,000 as possible.
- Each player records his or her 3-digit numbers and sums. Then each one subtracts the sum from 1,000. The player whose sum is closest to 1,000 scores 1 point.
- Repeat for a total of five rounds.

# Comparing Decimals

## Learn

**What Can I Do?**  
I want to compare decimals.



### Use a Number Line

Think: 0.4 is farther right on the number line.  
Therefore,  $0.4 > 0.37$

### Use Place Value

Think: Look at the digits in the tenths place.  
 $4 > 3$ , so  $0.4 > 0.37$ .

## Try It

• Compare. Write  $>$ ,  $<$ , or  $=$ . Use the number line.



1.  $0.51 < 0.62$       2.  $0.63 > 0.6$       3.  $0.34 > 0.2$

## Power Practice

• Compare. Write  $>$ ,  $<$ , or  $=$ .

4.  $0.7 < 0.9$       5.  $0.05 > 0.03$       6.  $0.15 > 0.13$       7.  $0.6 > 0.23$   
 8.  $0.5 = 0.50$       9.  $0.04 < 0.4$       10.  $0.72 < 0.74$       11.  $0.44 > 0.4$   
 12.  $0.20 > 0.02$       13.  $0.03 < 0.10$       14.  $0.92 > 0.29$       15.  $0.59 > 0.57$   
 16.  $0.1 > 0.09$       17.  $0.06 < 0.60$       18.  $0.7 = 0.70$       19.  $0.55 > 0.51$

## Ordering Decimals

Skill Builder



## Learn

## What Can I Do?

I want to write  
decimals in order.

## Use These Steps.

Write the numbers in a column. Line up the decimal points. Compare each digit in a column, starting with the column at the left. Find digits that are not equal.

3.06

3.6

2.8

Think:

 $2 < 3$ 

2.8 is the least.

3.06

3.6

2.8

Think:

 $0 < 6$  $3.06 < 3.6$ 

The order from least to greatest is:  
2.8, 3.06, 3.6



## Try It

• Find the greatest decimal in each set.

1. 3.2, 3.7, 4.5 4.5

2. 0.14, 0.32, 0.19 0.32

3. 5.6, 5.45, 5.47 5.6

4. 1.2, 1.6, 1.53, 1.41 1.6

5. 0.42, 0.5, 0.53, 0.48 0.53

6. 0.7, 1.4, 0.99, 1.26 1.4

## Power Practice

• Order from least to greatest.

7. 0.33, 0.71, 0.17, 0.2 0.17, 0.2, 0.33, 0.71

8. 2.1, 0.67, 1.9, 2.06 0.67, 1.9, 2.06, 2.1

9. 1.65, 3.04, 2.67, 3.1 1.65, 2.67, 3.04, 3.1

10. 0.2, 0.11, 0.04, 0.17 0.04, 0.11, 0.17, 0.2

11. 3.3, 3.16, 3.2, 3.02, 3.19 3.02, 3.16, 3.19, 3.2, 3.3

# Add and Subtract Decimals

## Learn

Add and subtract decimals as you would with whole numbers. You may need to write equivalent decimals first.

Add:  $0.5 + 0.78$

Align the decimal points in the numbers. Then add as you would with whole numbers.

Think:  $0.5 = 0.50$

$$\begin{array}{r} 0.50 \\ + 0.78 \\ \hline 1.28 \end{array}$$

Add the tenths.  
Regroup.

$$\begin{array}{r} 1 \\ 0.50 \\ + 0.78 \\ \hline 1.28 \end{array}$$

Add the ones.  
Align the decimal point in the sum.

$$\begin{array}{r} 1 \\ 0.50 \\ + 0.78 \\ \hline 1.28 \end{array}$$

Subtract:  $0.53 - 0.28$

Align the decimal points in the numbers. Then subtract.

Regroup to subtract the hundredths.

$$\begin{array}{r} 413 \\ 0.53 \\ - 0.28 \\ \hline 0.25 \end{array}$$

Subtract the tenths.  
Align the decimal point in the difference.

$$\begin{array}{r} 413 \\ 0.53 \\ - 0.28 \\ \hline 0.25 \end{array}$$

**What Can I Do?**  
I want to add and subtract decimals.



## Try It • Find each sum or difference.

$$\begin{array}{r} 1 \\ 0.25 \\ + 0.19 \\ \hline 0.44 \end{array}$$

$$\begin{array}{r} 15 \\ 0.25 \\ - 0.19 \\ \hline 0.06 \end{array}$$

$$\begin{array}{r} 1 \\ 0.54 \\ + 0.37 \\ \hline 0.91 \end{array}$$

$$\begin{array}{r} 414 \\ 0.54 \\ - 0.37 \\ \hline 0.17 \end{array}$$

$$\begin{array}{r} 0.64 \\ + 0.36 \\ \hline 1.00 \end{array}$$

$$\begin{array}{r} 514 \\ 0.64 \\ - 0.36 \\ \hline 0.28 \end{array}$$

$$\begin{array}{r} 0.30 \\ + 0.84 \\ \hline 1.14 \end{array}$$

$$\begin{array}{r} 510 \\ 0.60 \\ - 0.49 \\ \hline 0.11 \end{array}$$

Name \_\_\_\_\_

## Power Practice

• Find each sum or difference.

$$\begin{array}{r} 9. \quad 0.42 \\ + 0.78 \\ \hline 1.20 \end{array}$$

$$\begin{array}{r} 10. \quad \overset{3}{4} \overset{12}{32} \\ - 1.83 \\ \hline 2.49 \end{array}$$

$$\begin{array}{r} 11. \quad 3.28 \\ + 1.37 \\ \hline 4.65 \end{array}$$

$$\begin{array}{r} 12. \quad 1.12 \\ + 3.09 \\ \hline 4.21 \end{array}$$

$$\begin{array}{r} 13. \quad 0.90 \\ + 1.24 \\ \hline 2.14 \end{array}$$

$$\begin{array}{r} 14. \quad \overset{6}{2} \overset{18}{78} \\ - 1.09 \\ \hline 1.69 \end{array}$$

$$\begin{array}{r} 15. \quad 3.42 \\ + 2.99 \\ \hline 6.41 \end{array}$$

$$\begin{array}{r} 16. \quad \overset{3}{4} \overset{16}{77} \\ - 0.99 \\ \hline 3.78 \end{array}$$

$$\begin{array}{r} 17. \quad 0.72 \\ + 3.66 \\ \hline 4.38 \end{array}$$

$$\begin{array}{r} 18. \quad \overset{1}{6} \overset{12}{22} \\ - 2.19 \\ \hline 4.03 \end{array}$$

$$\begin{array}{r} 19. \quad 7.79 \\ + 8.11 \\ \hline 15.90 \end{array}$$

$$\begin{array}{r} 20. \quad \overset{3}{4} \overset{15}{55} \\ - 3.91 \\ \hline 0.64 \end{array}$$

$$\begin{array}{r} 21. \quad 5.31 \\ + 2.45 \\ \hline 7.76 \end{array}$$

$$\begin{array}{r} 22. \quad \overset{5}{6} \overset{12}{30} \\ - 0.77 \\ \hline 5.53 \end{array}$$

$$\begin{array}{r} 23. \quad 5.39 \\ + 3.49 \\ \hline 8.88 \end{array}$$

$$\begin{array}{r} 24. \quad \overset{3}{4} \overset{15}{59} \\ - 3.85 \\ \hline 0.74 \end{array}$$

$$25. \quad 34.09 + 1.9 = \underline{35.99}$$
$$\begin{array}{r} 34.09 \\ + 1.9 \\ \hline 35.99 \end{array}$$

$$26. \quad 139.0090 - 0.56 = \underline{138.4490}$$
$$\begin{array}{r} 139.0090 \\ - 0.5600 \\ \hline 138.4490 \end{array}$$

$$27. \quad 33.999 + 23.11 + 134.11 = \underline{191.219}$$
$$\begin{array}{r} 33.999 \\ 23.110 \\ 134.110 \\ \hline 191.219 \end{array}$$

$$28. \quad 302.22 - 8.19 = \underline{294.03}$$
$$\begin{array}{r} 302.22 \\ - 8.19 \\ \hline 294.03 \end{array}$$

$$29. \quad 103.47 + 0.99 = \underline{104.46}$$
$$\begin{array}{r} 103.47 \\ + 0.99 \\ \hline 104.46 \end{array}$$

$$30. \quad 45.7 - 0.001 = \underline{45.699}$$
$$\begin{array}{r} 45.700 \\ - 0.001 \\ \hline 45.699 \end{array}$$

# Multiplying Decimals by Powers of 10

## Learn

### What Can I Do?

I want to multiply a decimal by a power of 10.



### Use Patterns

Use patterns to multiply  $1,000 \times 0.067$ .

$$1 \times 0.067 = 0.067$$

$$10 \times 0.067 = 0.67$$

$$100 \times 0.067 = 6.7$$

Think: For each power of 10, move the decimal point one place to the right.

$$\text{So, } 1,000 \times 0.067 = 67.$$

Sometimes you will need to write zeros to place the decimal point.

$$1 \times 0.28 = 0.28$$

$$10 \times 0.28 = 2.8$$

$$100 \times 0.28 = 28$$

$$1,000 \times 0.28 = 280$$

## Try It • Complete each pattern.

1.  $1 \times 0.045 = 0.045$

$$10 \times 0.045 = 0.45$$

$$100 \times 0.045 = \underline{4.5}$$

$$1,000 \times 0.045 = \underline{45}$$

2.  $1 \times 0.56 = 0.56$

$$10 \times 0.56 = \underline{5.6}$$

$$100 \times 0.56 = \underline{56}$$

$$1,000 \times 0.56 = \underline{560}$$

3.  $1 \times 1.7 = 1.7$

$$10 \times 1.7 = \underline{17}$$

$$100 \times 1.7 = \underline{170}$$

$$1,000 \times 1.7 = \underline{1700}$$

## Power Practice • Multiply.

4.  $10 \times 0.08 = \underline{0.8}$

5.  $100 \times 0.07 = \underline{7}$

6.  $10 \times 2.6 = \underline{26}$

7.  $100 \times 5.13 = \underline{513}$

8.  $1,000 \times 0.25 = \underline{250}$

9.  $1,000 \times 0.079 = \underline{79}$

10.  $10 \times 8.01 = \underline{80.1}$

11.  $100 \times 3.004 = \underline{300.4}$

12.  $1,000 \times 0.456 = \underline{456}$

Name \_\_\_\_\_

# Multiply by Powers of Ten

Lesson  
2-1

## Learn

### What Can I Do?

I want to multiply  
a number by 10 or 100.

Check the zeros in the product.

$$8 \times 10 = 80$$

1 zero

$$100 \times 3 = 300$$

2 zeros

The answer has the same number of zeros  
as the power of ten.

**Try It** Write the number of zeros in the product.

1.  $100 \times 6$

2 zeros

2.  $100 \times 3$

2 zeros

3.  $10 \times 2$

1 zero

4.  $10 \times 7$

1 zero

5.  $4 \times 100$

2 zeros

6.  $9 \times 10$

1 zero

7.  $8 \times 100$

2 zeros

8.  $5 \times 10$

1 zero

**Power Practice** Multiply.

9.  $10 \times 8 = \underline{80}$

10.  $4 \times 10 = \underline{40}$

11.  $100 \times 5 = \underline{500}$

12.  $6 \times 100 = \underline{600}$

13.  $100 \times 4 = \underline{400}$

14.  $7 \times 10 = \underline{70}$

15.  $10 \times 2 = \underline{20}$

16.  $5 \times 10 = \underline{50}$

17.  $100 \times 9 = \underline{900}$

18.  $7 \times 100 = \underline{700}$

19.  $100 \times 8 = \underline{800}$

20.  $9 \times 10 = \underline{90}$



## Dividing Decimals by Powers of 10

## Learn

**What Can I Do?**

I want to divide a decimal by a power of 10.



## Use Patterns

Use patterns to divide  $642.3 \div 1,000$ .

$$642.3 \div 1 = 642.3$$

$$642.3 \div 10 = 64.23$$

$$642.3 \div 100 = 6.423$$

Think: For each power of 10, move the decimal point one place to the left.

$$\text{So, } \underline{0.6423} \div 1,000 = 0.6423$$

Sometimes you will need to write zeros to place the decimal point.

$$81.9 \div 1 = 81.9$$

$$81.9 \div 10 = 8.19$$

$$81.9 \div 100 = 0.819$$

$$81.9 \div 1,000 = 0.0819$$

**Try It** • Complete each pattern.

1.  $670.8 \div 1 = 670.8$

2.  $43.2 \div 1 = 43.2$

3.  $7.14 \div 1 = 7.14$

$670.8 \div 10 = 67.08$

$43.2 \div 10 = \underline{4.32}$

$7.14 \div 10 = \underline{0.714}$

$670.8 \div 100 = \underline{6.708}$

$43.2 \div 100 = \underline{0.432}$

$7.14 \div 100 = \underline{0.0714}$

$670.8 \div 1,000 = \underline{0.6708}$

$43.2 \div 1,000 = \underline{0.0432}$

$7.14 \div 1,000 = \underline{0.00714}$

**Power Practice** • Divide.

4.  $54.8 \div 10 = \underline{5.48}$

5.  $356.1 \div 10 = \underline{35.61}$

6.  $40.19 \times 100 = \underline{0.4019}$

7.  $371.4 \div 100 = \underline{3.714}$

8.  $802.1 \div 1,000 = \underline{0.8021}$

9.  $7.85 \div 10 = \underline{0.785}$

10.  $3.27 \div 100 = \underline{0.0327}$

11.  $14.03 \div 1,000 = \underline{0.01403}$

Name \_\_\_\_\_

# Write a Multiplication or Division Number Sentence

Lesson  
7-H

## Learn

### What Can I Do?

I want to know if I should write a multiplication or division number sentence.

### Multiply or Divide?

Read a phrase carefully to decide whether to multiply or divide.

Write the phrase *divide 96 by 8* as a number sentence.

Number sentence:  $96 \div 8$

## Try It Write each phrase as a number sentence.

1. Multiply 4 by 8  $4 \times 8$

$$4 \times 8 = 32$$

2. Divide 20 by 5  $20 \div 5$

$$20 \div 5 = 4$$

3. Find the product of 10 and 8  $10 \times 8$

$$10 \times 8 = 80$$

4. Find the quotient of 30 and 3  $30 \div 3$

$$30 \div 3 = 10$$

5. Divide 100 by 10  $100 \div 10$

$$100 \div 10 = 10$$

6. Find the quotient of 28 and 2  $28 \div 2$

$$28 \div 2 = 14$$

7. Find the product of 7 and 9  $7 \times 9$

$$7 \times 9 = 63$$

8. Multiply 12 by 4  $12 \times 4$

$$12 \times 4 = 48$$

**Factors**

**Learn**

**What Can I Do?**

I want to list all the factors of a number.



**Find Factor Pairs**

All numbers have at least two factors, the number 1 and the number itself.

$$3 = 1 \times 3$$

The factors of 3 are 1 and 3.

Some numbers have more than two factors. Look for all factor pairs whose product is equal to that number.

$$18 = 1 \times 18$$

$$18 = 2 \times 9$$

$$18 = 3 \times 6$$

The factors for 18 are 1, 2, 3, 6, 9 and 18.

**Try It**

Find the missing factors. Then list all the factors of each number.

1.  $20 = 1 \times \underline{20}$

$20 = 2 \times \underline{10}$

$20 = 4 \times \underline{5}$

Factors of 20:

1, 2, 4, 5, 10, 20

2.  $32 = 1 \times \underline{32}$

$32 = \underline{2} \times 16$

$32 = \underline{4} \times 8$

Factors of 32:

1, 2, 4, 8, 16, 32

3.  $45 = 1 \times \underline{45}$

$45 = \underline{3} \times 15$

$45 = 5 \times \underline{9}$

Factors of 45:

1, 3, 5, 9, 15, 45

**Power Practice**

List all the factors of each number.

4. 27 1, 3, 9, 27

5. 19 1, 19

6. 71 1, 71

7. 35 1, 5, 7, 35

8. 68 1, 2, 4, 17, 34, 68

9. 55 1, 5, 11, 55

10. 47 1, 47

11. 33 1, 3, 11, 33

12. 53 1, 53

13. 48 1, 2, 3, 4, 6, 8, 12, 16, 24, 48

14. 88 1, 2, 4, 8, 11, 22, 44, 88

# Multiples

## Learn

**What Can I Do?**  
I want to list the first five non-zero multiples of a number.



What are the first five non-zero multiples of 6?

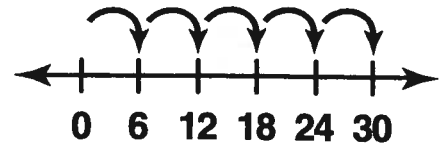
**Multiply by Factors of 1-5**

Find the product of 1 and 6, 2 and 6, 3 and 6, 4 and 6, and 5 and 6.

- $1 \times 6 = 6$
- $2 \times 6 = 12$
- $3 \times 6 = 18$
- $4 \times 6 = 24$
- $5 \times 6 = 30$

**Skip-Count by the Number**

Skip-count by 6.



So, 6, 12, 18, 24, 30 are the first five multiples of 6.

## Try It

Find the missing products. Then list the first five non-zero multiples of each number.

1.  $\begin{array}{r} 4 \\ \times 1 \\ \hline 4 \end{array}$   $\begin{array}{r} 4 \\ \times 2 \\ \hline 8 \end{array}$   $\begin{array}{r} 4 \\ \times 3 \\ \hline 12 \end{array}$   $\begin{array}{r} 4 \\ \times 4 \\ \hline 16 \end{array}$   $\begin{array}{r} 4 \\ \times 5 \\ \hline 20 \end{array}$

First 5 multiples of 4: 4, 8, 12, 16, 20

2. 15, 30, 45, 60, 75

First 5 multiples of 15: 15, 30, 45, 60, 75

## Power Practice

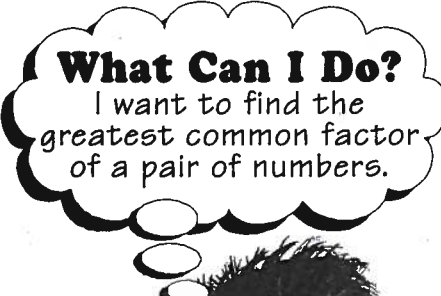
List the first 5 non-zero multiples of each number.

- 3. 3 3, 6, 9, 12, 15    4. 5 5, 10, 15, 20, 25    5. 8 8, 16, 24, 32, 40
- 6. 10 10, 20, 30, 40, 50    7. 40 40, 80, 120, 160, 200    8. 22 22, 44, 66, 88, 110
- 9. 25 25, 50, 75, 100, 125    10. 18 18, 36, 54, 72, 90    11. 16 16, 32, 48, 64, 80
- 12. 60 60, 120, 180, 240, 300    13. 24 24, 48, 72, 96, 120    14. 32 32, 64, 96, 128, 160

# Greatest Common Factor

## Learn

What is the greatest common factor (GCF) of 24 and 36?



**What Can I Do?**

I want to find the greatest common factor of a pair of numbers.

**Find Common Factors**

Find the factors of each number.

24: 1, 2, 3, 4, 6, 8, 12, 24

36: 1, 2, 3, 4, 6, 9, 12, 18, 36

Look for the common factors.

24: 1, 2, 3, 4, 6, 8, 12, 24

36: 1, 2, 3, 4, 6, 9, 12, 18, 36

The common factors of 24 and 36 are 1, 2, 3, 4, 6, and 12.

**Find the Greatest Common Factor**

12 is the greatest of the common factors of 24 and 36.

**Try It**

List the factors and common factors of each number. Then find the greatest common factor.

1. 4 and 20

factors of 4: 1, 2, 4

factors of 20: 1, 2, 4, 5, 10, 20

common factors of 4 and 20: 1, 2, 4

GCF of 4 and 20: 4

2. 25 and 40

factors of 25: 1, 5, 25

factors of 40: 1, 2, 4, 5, 8, 10, 20, 40

common factors of 25 and 40: 1, 5

GCF of 25 and 40: 5

3. 15 and 45

factors of 15:

1, 3, 5, 15

factors of 40:

1, 2, 4, 5, 8, 10, 20, 40

common factors of 15 and 40: 1, 5

GCF of 15 and 40: 5

4. 28 and 42

factors of 28:

1, 2, 4, 7, 14, 28

factors of 32:

1, 2, 4, 8, 16, 32

common factors of 28 and 32: 1, 2, 4

GCF of 28 and 32: 4

Name \_\_\_\_\_

**Power Practice**

• Find the greatest common factor.

5. 8 and 64 8

6. 5 and 35 5

7. 8 and 48 8

8. 10 and 55 5

9. 30 and 75 15

10. 28 and 63 7

11. 27 and 72 9

12. 18 and 60 6

13. 24 and 78 6

14. 14 and 56 14

15. 72 and 96 24

16. 88 and 96 8

17. 55 and 65 5

18. 40 and 100 20

19. 54 and 63 9

# Least Common Multiples

## Learn

### What Can I Do?

I want to find the least common multiple of a pair of numbers.



What is the least common multiple (LCM) of 6 and 15?

### Find Common Multiples

List non-zero multiples of each number.

6: 6, 12, 18, 24, 30, 36, 42, 48, 54, 60

15: 15, 30, 45, 60

Find common multiples.

6: 6, 12, 18, 24, **30**, 36, 42, 48, 54, 60

15: 15, **30**, 45, 60

30 is the least of the common multiples.

## Try It

List non-zero multiples of each number. Then find the least common multiple.

1. 3 and 4

multiples of 3:

3, 6, 9, 12, 15, 18, 21, 24

multiples of 4:

4, 8, 12, 16, 20, 24

common multiples of 3 and 4:

12, 24

LCM of 3 and 4: 12

2. 5 and 10

multiples of 5:

5, 10, 15, 20, 25, 30, 35

multiples of 10:

10, 20, 30, 40

common multiples of 5 and 10:

10, 20, 30

LCM of 5 and 10: 10

3. 6 and 12

multiples of 6:

6, 12, 18, 24

multiples of 12:

12, 24, 36, 48

common multiples of 6 and 12:

12, 24

LCM of 6 and 12: 12

4. 14 and 28

multiples of 14:

14, 28, 42, 56

multiples of 28:

28, 56, 84, 112

common multiples of 14 and 28:

28, 56

LCM of 14 and 28: 28

Name \_\_\_\_\_

**Power Practice**

• Find the least common multiple.

5. 7 and 21 21

6. 5 and 25 25

7. 6 and 8 24

8. 2 and 12 12

9. 4 and 10 20

10. 8 and 12 24

11. 3 and 7 21

12. 14 and 35 70

13. 30 and 45 90

14. 13 and 52 52

15. 8 and 28 56

16. 12 and 18 36

17. 9 and 24 72

18. 20 and 32 160

19. 5 and 35 35



## Simplify Fractions

## Learn

**What Can I Do?**

I want to write a fraction in simplest form.

**Use Common Factors**

A fraction is in **simplest form** when the numerator and denominator have no common factors other than 1.

To find the simplest form of  $\frac{24}{30}$ , begin by dividing the numerator and denominator by a common factor.

Common factors for 24 and 30 are 1, 2, 3, and 6.

$$\frac{24}{30} = \frac{24 \div 3}{30 \div 3} = \frac{8}{10}$$

Think: 8 and 10 still have 2 as a common factor. Divide by 2.

$$\frac{8}{10} = \frac{8 \div 2}{10 \div 2} = \frac{4}{5}$$

**Use the GCF**

To find the simplest form of a fraction in one step, divide by the GCF.

Think: The GCF of 24 and 30 is 6.

$$\frac{24}{30} = \frac{24 \div 6}{30 \div 6} = \frac{4}{5}$$

**Try It**

• Complete. Write the fraction in simplest form.

$$1. \quad \frac{12}{15} = \frac{12 \div 3}{15 \div 3} = \frac{4}{5}$$

$$2. \quad \frac{30}{40} = \frac{30 \div 10}{40 \div 10} = \frac{3}{4}$$

$$3. \quad \frac{8}{14} = \frac{8 \div 2}{14 \div 2} = \frac{4}{7}$$

$$4. \quad \frac{24}{36} = \frac{24 \div 12}{36 \div 12} = \frac{2}{3}$$

$$5. \quad \frac{20}{25} = \frac{20 \div 5}{25 \div 5} = \frac{4}{5}$$

$$6. \quad \frac{34}{42} = \frac{34 \div 2}{42 \div 2} = \frac{17}{21}$$

$$7. \quad \frac{9}{27} = \frac{9 \div 9}{27 \div 9} = \frac{1}{3}$$

$$8. \quad \frac{20}{80} = \frac{20 \div 20}{80 \div 20} = \frac{1}{4}$$

Name \_\_\_\_\_

## Power Practice

• Write in simplest form.

$$9. \frac{6}{27} = \frac{2}{9}$$

$$10. \frac{12}{48} = \frac{1}{4}$$

$$11. \frac{21}{30} = \frac{7}{10}$$

$$12. \frac{20}{45} = \frac{4}{9}$$

$$13. \frac{11}{55} = \frac{1}{5}$$

$$14. \frac{24}{48} = \frac{1}{2}$$

$$15. \frac{9}{63} = \frac{1}{7}$$

$$16. \frac{12}{60} = \frac{1}{5}$$

$$17. \frac{10}{74} = \frac{5}{37}$$

$$18. \frac{24}{56} = \frac{3}{7}$$

$$19. \frac{13}{39} = \frac{1}{3}$$

$$20. \frac{28}{46} = \frac{14}{23}$$

$$21. \frac{16}{80} = \frac{1}{5}$$

$$22. \frac{32}{84} = \frac{8}{21}$$

$$23. \frac{15}{70} = \frac{3}{14}$$

$$24. \frac{26}{52} = \frac{1}{2}$$

$$25. \frac{17}{68} = \frac{1}{4}$$

$$26. \frac{35}{55} = \frac{7}{11}$$

$$27. \frac{48}{80} = \frac{3}{5}$$

$$28. \frac{84}{96} = \frac{7}{8}$$

## Learn with Partners & Parents

### Number Lines for Equivalent Fractions

- Create a number line showing the fractions from  $\frac{0}{8}$  to  $\frac{8}{8}$ .
- Simplify as many of these fractions as you can. Write the simplest form fraction underneath the fraction.
- Repeat the activity for fractions between 0 and 1 with denominators of 12, 16, 24, and 32. Draw one number line for each different denominator.

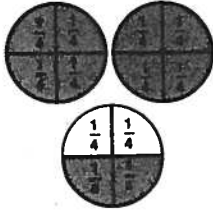
# Renaming Improper Fractions

## Learn

**What Can I Do?**  
I want to rename an improper fraction as a mixed number.



### Use Fraction Models



Think:

$\frac{10}{4}$  are shaded. Two whole circles and  $\frac{2}{4}$  of the last circle is shaded.

$$\frac{10}{4} = 2\frac{2}{4} = 2\frac{1}{2}$$

### Use Division

Divide the numerator by the denominator.

$$\frac{10}{4} = 10 \div 4 \quad \begin{array}{r} 2 \text{ R}2 \\ 4 \overline{)10} \\ \underline{-08} \\ 2 \end{array}$$

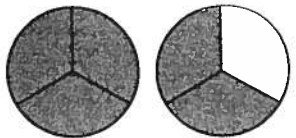
Think: Express the remainder as a fraction, where the remainder is the numerator and the divisor is the denominator.

$$10 \div 4 = 2\frac{2}{4} = 2\frac{1}{2}$$

$$\text{So, } \frac{10}{4} = 2\frac{1}{2}$$

## Try It

Use the models to complete the sentences. Then rename the fraction as a mixed number.

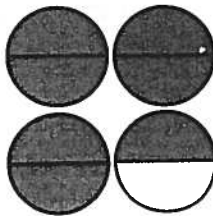


1.  $\frac{5}{3} = ?$

1 whole circle is shaded.

$\frac{2}{3}$  of the last circle is shaded.

$$\frac{5}{3} = \underline{1\frac{2}{3}}$$

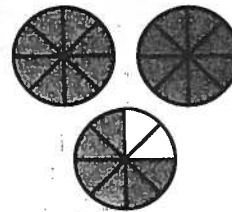


2.  $\frac{7}{2} = ?$

3 whole circles are shaded.

$\frac{1}{2}$  of the last circle is shaded.

$$\frac{7}{2} = \underline{3\frac{1}{2}}$$



3.  $\frac{22}{8} = ?$

2 whole circles are shaded.

$\frac{6}{8} = \frac{3}{4}$  of the last circle is shaded.

$$\frac{22}{8} = \underline{2\frac{3}{4}}$$

Name \_\_\_\_\_

Complete the division. Then write the quotient as a whole or mixed number.

4.  $\frac{7}{5} = ?$

$$\begin{array}{r} 1 \text{ R } 2 \\ 5 \overline{) 7} \\ - 5 \\ \hline 2 \end{array}$$

$\frac{7}{5} = 1 \frac{2}{5}$

5.  $\frac{19}{4} = ?$

$$\begin{array}{r} 4 \text{ R } 3 \\ 4 \overline{) 19} \\ - 16 \\ \hline 3 \end{array}$$

$\frac{19}{4} = 4 \frac{3}{4}$

6.  $\frac{16}{8} = ?$

$$\begin{array}{r} 2 \text{ R } 0 \\ 8 \overline{) 16} \\ - 16 \\ \hline 0 \end{array}$$

$\frac{16}{8} = 2 \frac{0}{8}$

7.  $\frac{33}{6} = ?$

$$\begin{array}{r} 5 \text{ R } 3 \\ 6 \overline{) 33} \\ - 30 \\ \hline 3 \end{array}$$

$\frac{33}{6} = 5 \frac{3}{6} = 5 \frac{1}{2}$

8.  $\frac{21}{8} = ?$

$$\begin{array}{r} 2 \text{ R } 5 \\ 8 \overline{) 21} \\ - 16 \\ \hline 5 \end{array}$$

$\frac{21}{8} = 2 \frac{5}{8}$

9.  $\frac{28}{7} = ?$

$$\begin{array}{r} 4 \text{ R } 0 \\ 7 \overline{) 28} \\ - 28 \\ \hline 0 \end{array}$$

$\frac{28}{7} = 4 \frac{0}{7}$

10.  $\frac{33}{9} = ?$

$$\begin{array}{r} 3 \text{ R } 6 \\ 9 \overline{) 33} \\ - 27 \\ \hline 6 \end{array}$$

$\frac{33}{9} = 3 \frac{6}{9} = 3 \frac{2}{3}$

11.  $\frac{50}{12} = ?$

$$\begin{array}{r} 4 \text{ R } 2 \\ 12 \overline{) 50} \\ - 48 \\ \hline 2 \end{array}$$

$\frac{50}{12} = 4 \frac{2}{12} = 4 \frac{1}{6}$

### Power Practice

Write as a whole or mixed number in simplest form.

12.  $\frac{10}{3} = 3 \frac{1}{3}$

13.  $\frac{17}{4} = 4 \frac{1}{4}$

14.  $\frac{30}{8} = 3 \frac{6}{8} = 3 \frac{3}{4}$

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

16.  $\frac{30}{7} = 4 \frac{2}{7}$

17.  $\frac{19}{3} = 6 \frac{1}{3}$

18.  $\frac{40}{8} = 5$

19.  $\frac{25}{6} = 4 \frac{1}{6}$

20.  $\frac{35}{2} = 17 \frac{1}{2}$

21.  $\frac{21}{6} = 3 \frac{3}{6} = 3 \frac{1}{2}$

22.  $\frac{44}{9} = 4 \frac{8}{9}$

23.  $\frac{27}{12} = 2 \frac{3}{12} = 2 \frac{1}{4}$

24.  $\frac{41}{6} = 6 \frac{5}{6}$

25.  $\frac{66}{9} = 7 \frac{3}{9} = 7 \frac{1}{3}$

26.  $\frac{84}{7} = 12$

27.  $\frac{34}{6} = 5 \frac{4}{6} = 5 \frac{2}{3}$

28.  $\frac{33}{3} = 11$

29.  $\frac{60}{8} = 7 \frac{4}{8} = 7 \frac{1}{2}$

30.  $\frac{55}{4} = 13 \frac{3}{4}$

31.  $\frac{65}{5} = 13$

32.  $\frac{49}{7} = 7$

33.  $\frac{28}{6} = 4 \frac{4}{6} = 4 \frac{2}{3}$

34.  $\frac{27}{16} = 1 \frac{11}{16}$

35.  $\frac{80}{12} = 6 \frac{8}{12} = 6 \frac{2}{3}$

# Renaming Improper Fractions

## Learn

**What Can I Do?**  
I want to rename an improper fraction as a mixed number.



**Use Division**

Rename  $\frac{14}{4}$  as a mixed number.

Divide the numerator by the denominator.

$$\frac{14}{4} = 14 \div 4$$

$$\begin{array}{r} 3 \\ 4 \overline{) 14} \\ \underline{-12} \\ 2 \end{array}$$

Think: To continue, divide 2 by 4.

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

So, the remainder can be expressed as  $\frac{2}{4}$  or  $\frac{1}{2}$ .

The quotient is:

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

**Try It** • Divide. Then write the quotient as a whole or mixed number in simplest form.

1.  $\frac{13}{5} = ?$

$$\begin{array}{r} 2\frac{3}{5} \\ 5 \overline{) 13} \\ \underline{-10} \\ 3 \end{array}$$

$$\frac{13}{5} = 2\frac{3}{5}$$

2.  $\frac{42}{9} = ?$

$$\begin{array}{r} 4\frac{6}{9} = 4\frac{2}{3} \\ 9 \overline{) 42} \\ \underline{-36} \\ 6 \end{array}$$

$$\frac{42}{9} = 4\frac{2}{3}$$

**Power Practice**

• Write as a whole or mixed number in simplest form.

3.  $\frac{29}{8} = 3\frac{5}{8}$

4.  $\frac{57}{6} = 9\frac{3}{6} = 9\frac{1}{2}$

5.  $\frac{17}{3} = 5\frac{2}{3}$

6.  $\frac{27}{5} = 5\frac{2}{5}$

7.  $\frac{38}{6} = 6\frac{2}{6} = 6\frac{1}{3}$

8.  $\frac{35}{5} = 7$

Name \_\_\_\_\_

$$9. \frac{44}{8} = \underline{5\frac{4}{8}} = 5\frac{1}{2}$$

$$10. \frac{75}{9} = \underline{8\frac{3}{9}} = 8\frac{1}{3}$$

$$11. \frac{63}{5} = \underline{12\frac{3}{5}}$$

$$12. \frac{81}{8} = \underline{10\frac{1}{8}}$$

$$13. \frac{36}{12} = \underline{3}$$

$$14. \frac{51}{7} = \underline{7\frac{2}{7}}$$

$$15. \frac{25}{3} = \underline{8\frac{1}{3}}$$

$$16. \frac{69}{10} = \underline{6\frac{9}{10}}$$

$$17. \frac{72}{8} = \underline{9}$$

$$18. \frac{46}{7} = \underline{6\frac{4}{7}}$$

$$19. \frac{53}{6} = \underline{8\frac{5}{6}}$$

$$20. \frac{80}{9} = \underline{8\frac{8}{9}}$$

$$21. \frac{37}{4} = \underline{9\frac{1}{4}}$$

$$22. \frac{65}{5} = \underline{13}$$

## Learn with Partners & Parents

### Renaming Game!

Use two sets of index cards numbered 1–9. Mix up the two sets of cards.

- Player 1 draws two cards and uses them to write an improper fraction. Player 2 then writes the fraction as a whole or mixed number.
- Player 2 then returns the cards to the deck and mixes them up again. The two players then change roles.
- Continue to play until each player has had ten opportunities to rename an improper fraction.

**Learn** Adding Fractions

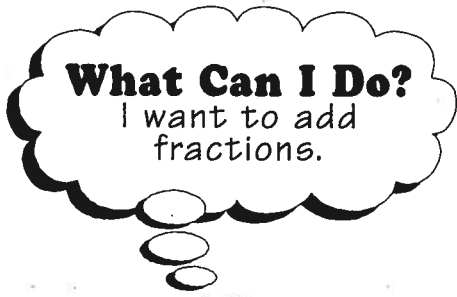
**Use These Steps**

Add the numerators.  
Use the common denominator.

$$\frac{2}{3} + \frac{2}{3} = \frac{4}{3}$$

$\frac{1}{3}$	$\frac{1}{3}$
---------------	---------------

$\frac{1}{3}$	$\frac{1}{3}$
---------------	---------------



Write the sum in simplest form

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

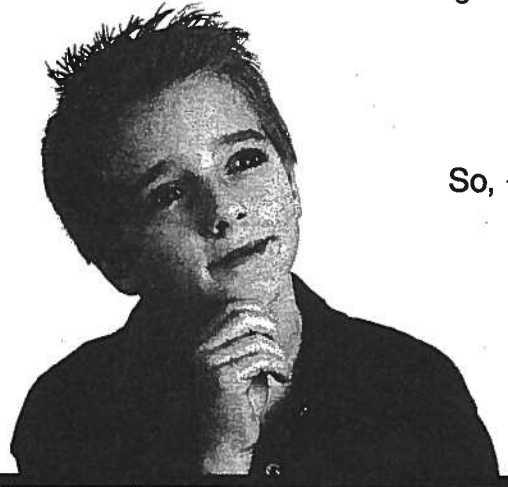
$\frac{1}{3}$	$\frac{1}{3}$
---------------	---------------

$\frac{1}{3}$	$\frac{1}{3}$
---------------	---------------

1
---

$\frac{1}{3}$
---------------

So,  $\frac{2}{3} + \frac{2}{3} = 1\frac{1}{3}$



**Try It** • Use the fraction bars to find each sum.

1.

$\frac{1}{8}$	$\frac{1}{8}$
---------------	---------------

$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
---------------	---------------	---------------

$$\begin{array}{r} \frac{2}{8} \\ + \frac{3}{8} \\ \hline \frac{5}{8} \end{array}$$

2.

$\frac{1}{5}$	$\frac{1}{5}$	$\frac{1}{5}$
---------------	---------------	---------------

$\frac{1}{5}$	$\frac{1}{5}$
---------------	---------------

$$\begin{array}{r} \frac{3}{5} \\ + \frac{2}{5} \\ \hline \frac{5}{5} = 1 \end{array}$$

1
---

Name \_\_\_\_\_

### Power Practice

• Find each sum. Write the answer in simplest form.

$$\begin{array}{r} 3. \quad \frac{2}{5} \\ + \frac{2}{5} \\ \hline \frac{4}{5} \end{array}$$

$$\begin{array}{r} 4. \quad \frac{3}{8} \\ + \frac{3}{8} \\ \hline \frac{6}{8} = \frac{3}{4} \end{array}$$

$$\begin{array}{r} 5. \quad \frac{1}{10} \\ + \frac{7}{10} \\ \hline \frac{8}{10} = \frac{4}{5} \end{array}$$

$$\begin{array}{r} 6. \quad \frac{7}{9} \\ + \frac{5}{9} \\ \hline \frac{12}{9} = 1\frac{3}{9} = 1\frac{1}{3} \end{array}$$

$$\begin{array}{r} 7. \quad \frac{5}{12} \\ + \frac{5}{12} \\ \hline \frac{10}{12} = \frac{5}{6} \end{array}$$

$$\begin{array}{r} 8. \quad \frac{3}{5} \\ + \frac{1}{5} \\ \hline \frac{4}{5} \end{array}$$

$$\begin{array}{r} 9. \quad \frac{3}{4} \\ + \frac{3}{4} \\ \hline \frac{6}{4} = 1\frac{2}{4} = 1\frac{1}{2} \end{array}$$

$$\begin{array}{r} 10. \quad \frac{7}{10} \\ + \frac{9}{10} \\ \hline \frac{16}{10} = 1\frac{6}{10} = 1\frac{3}{5} \end{array}$$

$$\begin{array}{r} 11. \quad \frac{5}{6} \\ + \frac{5}{6} \\ \hline \frac{10}{6} = 1\frac{4}{6} = 1\frac{2}{3} \end{array}$$

$$\begin{array}{r} 12. \quad \frac{5}{12} \\ + \frac{7}{12} \\ \hline \frac{12}{12} = 1 \end{array}$$

$$\begin{array}{r} 13. \quad \frac{2}{5} \\ + \frac{3}{5} \\ \hline \frac{5}{5} = 1 \end{array}$$

$$\begin{array}{r} 14. \quad \frac{5}{9} \\ + \frac{8}{9} \\ \hline \frac{13}{9} = 1\frac{4}{9} \end{array}$$

$$\begin{array}{r} 15. \quad \frac{7}{8} \\ + \frac{3}{8} \\ \hline \frac{10}{8} = 1\frac{2}{8} = 1\frac{1}{4} \end{array}$$

$$\begin{array}{r} 16. \quad \frac{5}{12} \\ + \frac{1}{12} \\ \hline \frac{6}{12} = \frac{1}{2} \end{array}$$

$$\begin{array}{r} 17. \quad \frac{3}{10} \\ + \frac{7}{10} \\ \hline \frac{10}{10} = 1 \end{array}$$

$$\begin{array}{r} 18. \quad \frac{1}{9} \\ + \frac{5}{9} \\ \hline \frac{6}{9} = \frac{2}{3} \end{array}$$

$$\begin{array}{r} 19. \quad \frac{7}{8} \\ + \frac{5}{8} \\ \hline \frac{12}{8} = 1\frac{4}{8} = 1\frac{1}{2} \end{array}$$

$$\begin{array}{r} 20. \quad \frac{6}{11} \\ + \frac{5}{11} \\ \hline \frac{11}{11} = 1 \end{array}$$

$$\begin{array}{r} 21. \quad \frac{4}{5} \\ + \frac{3}{5} \\ \hline \frac{7}{5} = 1\frac{2}{5} \end{array}$$

$$\begin{array}{r} 22. \quad \frac{5}{16} \\ + \frac{13}{16} \\ \hline \frac{18}{16} = 1\frac{2}{16} = 1\frac{1}{8} \end{array}$$

$$23. \quad \frac{4}{9} + \frac{7}{9} = \frac{11}{9} = 1\frac{2}{9}$$

$$24. \quad \frac{3}{8} + \frac{6}{8} = \frac{9}{8} = 1\frac{1}{8}$$

$$25. \quad \frac{5}{10} + \frac{3}{10} = \frac{8}{10} = \frac{4}{5}$$



# Subtracting Fractions

## Learn

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

### Use These Steps

Subtract the numerators.  
Use the common denominator.

**What Can I Do?**  
I want to subtract fractions.

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

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

Write the difference in simplest form.

$$\frac{3}{6} = \frac{1}{2}$$

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

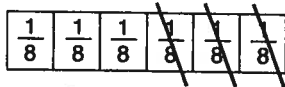
$\frac{1}{2}$
---------------

So,  $\frac{4}{6} - \frac{1}{6} = \frac{1}{2}$

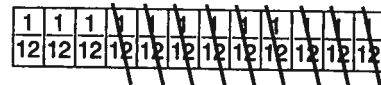


## Try It • Use the fraction bars to find each difference.

$$\begin{array}{r} 1. \quad \frac{6}{8} \\ - \quad \frac{3}{8} \\ \hline \frac{3}{8} \end{array}$$



$$\begin{array}{r} 2. \quad \frac{10}{12} \\ - \quad \frac{7}{12} \\ \hline \frac{3}{12} = \frac{1}{4} \end{array}$$



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

Name \_\_\_\_\_

## Power Practice

- Find each difference.
- Write the answer in simplest form.

$$\begin{array}{r} 3. \quad \frac{4}{5} \\ - \frac{2}{5} \\ \hline \frac{2}{5} \end{array}$$

$$\begin{array}{r} 4. \quad \frac{7}{8} \\ - \frac{5}{8} \\ \hline \frac{2}{8} = \frac{1}{4} \end{array}$$

$$\begin{array}{r} 5. \quad \frac{9}{10} \\ - \frac{7}{10} \\ \hline \frac{2}{10} = \frac{1}{5} \end{array}$$

$$\begin{array}{r} 6. \quad \frac{11}{12} \\ - \frac{5}{12} \\ \hline \frac{6}{12} = \frac{1}{2} \end{array}$$

$$\begin{array}{r} 7. \quad \frac{13}{16} \\ - \frac{9}{16} \\ \hline \frac{4}{16} = \frac{1}{4} \end{array}$$

$$\begin{array}{r} 8. \quad \frac{3}{5} \\ - \frac{1}{5} \\ \hline \frac{2}{5} \end{array}$$

$$\begin{array}{r} 9. \quad \frac{7}{8} \\ - \frac{3}{8} \\ \hline \frac{4}{8} = \frac{1}{2} \end{array}$$

$$\begin{array}{r} 10. \quad \frac{7}{10} \\ - \frac{3}{10} \\ \hline \frac{4}{10} = \frac{2}{5} \end{array}$$

$$\begin{array}{r} 11. \quad \frac{5}{6} \\ - \frac{1}{6} \\ \hline \frac{4}{6} = \frac{2}{3} \end{array}$$

$$\begin{array}{r} 12. \quad \frac{8}{9} \\ - \frac{5}{9} \\ \hline \frac{3}{9} = \frac{1}{3} \end{array}$$

$$\begin{array}{r} 13. \quad \frac{3}{4} \\ - \frac{1}{4} \\ \hline \frac{2}{4} = \frac{1}{2} \end{array}$$

$$\begin{array}{r} 14. \quad \frac{7}{9} \\ - \frac{2}{9} \\ \hline \frac{5}{9} \end{array}$$

$$\begin{array}{r} 15. \quad \frac{11}{12} \\ - \frac{1}{12} \\ \hline \frac{10}{12} = \frac{5}{6} \end{array}$$

$$\begin{array}{r} 16. \quad \frac{7}{8} \\ - \frac{2}{8} \\ \hline \frac{5}{8} \end{array}$$

$$17. \quad \frac{4}{5} - \frac{1}{5} = \frac{3}{5}$$

$$18. \quad \frac{5}{8} - \frac{1}{8} = \frac{4}{8} = \frac{1}{2}$$

$$19. \quad \frac{8}{9} - \frac{1}{9} = \frac{7}{9}$$

$$20. \quad \frac{11}{16} - \frac{5}{16} = \frac{6}{16} = \frac{3}{8}$$

## Learn with Partners & Parents

### Make One Half

Write these fractions on cards or slips of paper.

$$\frac{1}{12}, \frac{5}{12}, \frac{1}{10}, \frac{3}{10}, \frac{1}{9}, \frac{2}{9},$$

$$\frac{4}{9}, \frac{1}{8}, \frac{3}{8}, \frac{1}{6}, \frac{1}{5}, \frac{2}{5},$$

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

- Turn the cards over and mix them up. A player draws a card.
- Players give the fraction that, when added to the fraction on the card, will make one half.
- The player who gets the correct answer first gets 1 point.
- The first player with 7 points is the winner.

## Add Fractions

## Learn

**What Can I Do?**

I want to add fractions.

**Like Denominators**

$$\text{Add: } \frac{3}{8} + \frac{4}{8}$$

- Both fractions have a denominator of 8. To add fractions with like denominators, add the numerators. Write the sum over the common denominator, 8.

$$\frac{3}{8} + \frac{4}{8} = \frac{3+4}{8} = \frac{7}{8}$$

**Unlike Denominators**

$$\text{Add: } \frac{5}{6} + \frac{1}{4}$$

- The denominators of these fractions are different. To add fractions with unlike denominators, use the following steps.

1. Find the least common denominator (LCD) of the fractions.

The LCD is the least common multiple of the denominator.

Multiples of 6: 6, **12**, 18, 24, 30

Multiples of 4: 4, 8, **12**, 16

The least common multiple of 6 and 4 is 12.

2. Rewrite each fraction using 12 as the denominator.

$$\frac{5}{6} = \frac{5 \times 2}{6 \times 2} = \frac{10}{12}$$

$$\frac{1}{4} = \frac{1 \times 3}{4 \times 3} = \frac{3}{12}$$

3. Add. Write the sum in simplest form.

$$\frac{5}{6} + \frac{1}{4} = \frac{10}{12} + \frac{3}{12} = \frac{13}{12} = \frac{12}{12} + \frac{1}{12} = 1 \frac{1}{12}$$

Name \_\_\_\_\_

### Try It

- Add. Write the answer in simplest form.

$$1. \frac{1}{7} + \frac{4}{7} = \underline{\frac{5}{7}}$$

$$2. \frac{3}{4} + \frac{3}{4} = \underline{\frac{6}{4} = 1\frac{2}{4} = 1\frac{1}{2}}$$

$$3. \frac{5}{12} + \frac{1}{4}$$

$$4. \frac{3}{5} + \frac{1}{2}$$

$$= \frac{5}{12} + \frac{3}{12} = \frac{8}{12}$$

$$= \frac{6}{10} + \frac{5}{10} = \frac{11}{10}$$

$$= \underline{\frac{2}{3}}$$

$$= \underline{1\frac{1}{10}}$$

### Power Practice

- Add. Write the sum in simplest form.

$$5. \frac{1}{9} + \frac{5}{9} = \underline{\frac{6}{9} = \frac{2}{3}}$$

$$6. \frac{1}{6} + \frac{3}{6} = \underline{\frac{4}{6} = \frac{2}{3}}$$

$$7. \frac{1}{8} + \frac{5}{8} = \underline{\frac{6}{8} = \frac{3}{4}}$$

$$8. \frac{2}{11} + \frac{4}{11} = \underline{\frac{6}{11}}$$

$$9. \frac{2}{4} + \frac{3}{4} = \underline{\frac{5}{4} = 1\frac{1}{4}}$$

$$10. \frac{3}{7} + \frac{6}{7} = \underline{\frac{9}{7} = 1\frac{2}{7}}$$

$$11. \frac{2}{5} + \frac{7}{10} = \underline{\frac{11}{10} = 1\frac{1}{10}}$$
  
$$\frac{4}{10} + \frac{7}{10}$$

$$12. \frac{5}{6} + \frac{4}{9} = \underline{\frac{22}{18} = 1\frac{4}{18} = 1\frac{2}{9}}$$
  
$$\frac{15}{18} + \frac{7}{18}$$

$$13. \frac{1}{2} + \frac{1}{8} = \underline{\frac{5}{8}}$$
  
$$\frac{4}{8} + \frac{1}{8}$$

$$14. \frac{3}{8} + \frac{3}{8} = \underline{\frac{21}{24} = \frac{7}{8}}$$
  
$$\frac{9}{24} + \frac{12}{24}$$

## Learn with Partners & Parents

### Fractions and Figures

On 20 index cards write a fraction addition problem on one side and the answer on the other.

- Stack the cards with the problem side face up. The first player thinks of a word and, on a piece of paper, draws blanks to stand for the letters in the word.
- The other player picks the top card and must solve the problem on the card before he or she can guess a letter. An incorrect solution or wrong guess allows the first player to draw one of six segments of a stick figure.
- The second player continues until he or she has guessed the word or until the stick figure has been completed. Then it is the first player's turn.

## Subtract Fractions

## Learn

**What Can I Do?**

I want to subtract fractions.

**Like Denominators**

Subtract:  $\frac{7}{8} - \frac{3}{8}$

- Both fractions have a denominator of 8. To subtract fractions with like denominators, subtract the numerators and write the difference over the common denominator. Write the fraction in simplest form.

$$\frac{7}{8} - \frac{3}{8} = \frac{7-3}{8} = \frac{4}{8} = \frac{1}{2}$$

**Unlike Denominators**

Subtract:  $\frac{4}{5} - \frac{1}{2}$

- The denominators of the fractions are different. To subtract fractions with unlike denominators, follow these steps.

1. Find the least common denominator (LCD) of the fractions.

The LCD is the least common multiple of 5 and 2.

Multiples of 5: 5, 10, 15, 20

Multiples of 2: 2, 4, 6, 8, 10, 12

The least common multiple of 5 and 2 is 10.

2. Rewrite each fraction using 10 as the denominator.

$$\frac{4}{5} = \frac{4 \times 2}{5 \times 2} = \frac{8}{10}$$

$$\frac{1}{2} = \frac{1 \times 5}{2 \times 5} = \frac{5}{10}$$

3. Subtract. Simplify the difference, if possible.

$$\frac{4}{5} - \frac{1}{2} = \frac{8}{10} - \frac{5}{10} = \frac{8-5}{10} = \frac{3}{10}$$

Name \_\_\_\_\_

### Try It

• Subtract. Write the answer in simplest form.

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

$$2. \frac{5}{9} - \frac{2}{9} = \frac{3}{9} = \frac{1}{3}$$

$$3. \frac{2}{3} - \frac{2}{6}$$

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

$$\frac{4}{6} - \frac{2}{6} = \frac{2}{6} = \frac{1}{3}$$

$$\frac{9}{12} - \frac{4}{12} = \frac{5}{12}$$

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

### Power Practice

• Subtract. Write the difference in simplest form.

$$5. \begin{array}{r} \frac{5}{7} \\ - \frac{4}{7} \\ \hline \frac{1}{7} \end{array}$$

$$6. \begin{array}{r} \frac{6}{8} \\ - \frac{1}{8} \\ \hline \frac{5}{8} \end{array}$$

$$7. \begin{array}{r} \frac{10}{12} \\ - \frac{5}{12} \\ \hline \frac{5}{12} \end{array}$$

$$8. \begin{array}{r} \frac{7}{10} \\ - \frac{3}{10} \\ \hline \frac{4}{10} = \frac{2}{5} \end{array}$$

$$9. \begin{array}{r} \frac{8}{9} \\ - \frac{5}{9} \\ \hline \frac{3}{9} = \frac{1}{3} \end{array}$$

$$10. \begin{array}{r} \frac{11}{15} \\ - \frac{6}{15} \\ \hline \frac{5}{15} = \frac{1}{3} \end{array}$$

$$11. \frac{21}{40} - \frac{15}{40} = \frac{6}{40} = \frac{3}{20}$$

$$12. \frac{21}{30} - \frac{5}{30} = \frac{16}{30} = \frac{8}{15}$$

$$13. \frac{21}{24} - \frac{5}{24} = \frac{16}{24} = \frac{2}{3}$$

$$14. \begin{array}{r} \frac{7}{10} - \frac{1}{5} \\ \frac{7}{10} - \frac{2}{10} \\ \hline \frac{5}{10} = \frac{1}{2} \end{array}$$

$$15. \begin{array}{r} \frac{5}{6} - \frac{2}{9} \\ \frac{15}{18} - \frac{4}{18} \\ \hline \frac{11}{18} \end{array}$$

$$16. \begin{array}{r} \frac{3}{4} - \frac{1}{3} \\ \frac{9}{12} - \frac{4}{12} \\ \hline \frac{5}{12} \end{array}$$

$$17. \begin{array}{r} \frac{5}{8} - \frac{1}{2} \\ \frac{5}{8} - \frac{4}{8} \\ \hline \frac{1}{8} \end{array}$$

$$18. \begin{array}{r} \frac{5}{6} - \frac{3}{8} \\ \frac{20}{24} - \frac{9}{24} \\ \hline \frac{11}{24} \end{array}$$

$$19. \begin{array}{r} \frac{3}{4} - \frac{2}{5} \\ \frac{15}{20} - \frac{8}{20} \\ \hline \frac{7}{20} \end{array}$$

$$20. \begin{array}{r} \frac{1}{2} - \frac{3}{10} \\ \frac{5}{10} - \frac{3}{10} \\ \hline \frac{2}{10} = \frac{1}{5} \end{array}$$

$$21. \begin{array}{r} \frac{3}{4} - \frac{7}{10} \\ \frac{15}{20} - \frac{14}{20} \\ \hline \frac{1}{20} \end{array}$$

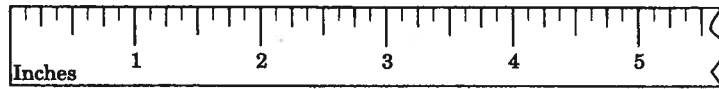
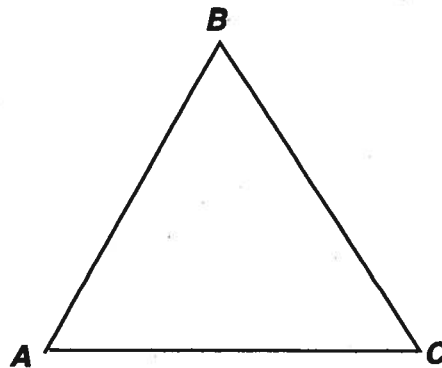
$$22. \begin{array}{r} \frac{4}{5} - \frac{2}{3} \\ \frac{12}{15} - \frac{10}{15} \\ \hline \frac{2}{15} \end{array}$$

# Measure Sides of Polygons

## Learn

You can use an inch ruler to measure.

**What Can I Do?**  
I want to find the length of a side of a polygon.

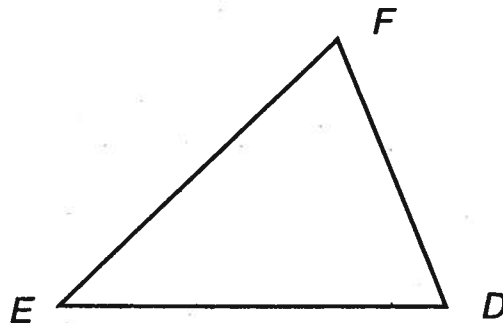


- Find the length of side AC of triangle ABC.

Side CA of triangle ABC measures 3 inches.

## Try It

- Use an inch ruler to find the length of the side named.



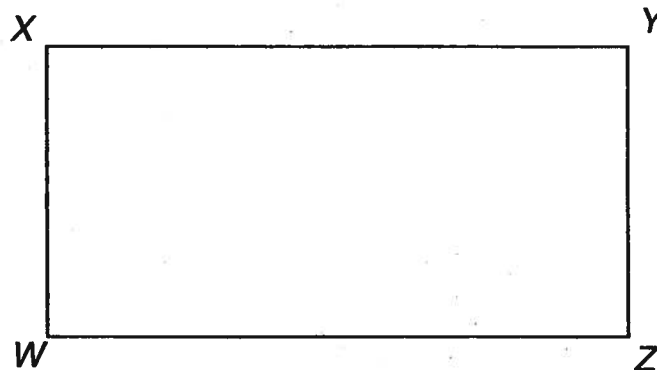
1. Side ED 2 in.
2. Side EF 2 in
3. Side DF 1 1/2 in

4. Side YZ 1 1/2 in

5. Side WX 1 1/2 in

6. Side XY 3 in

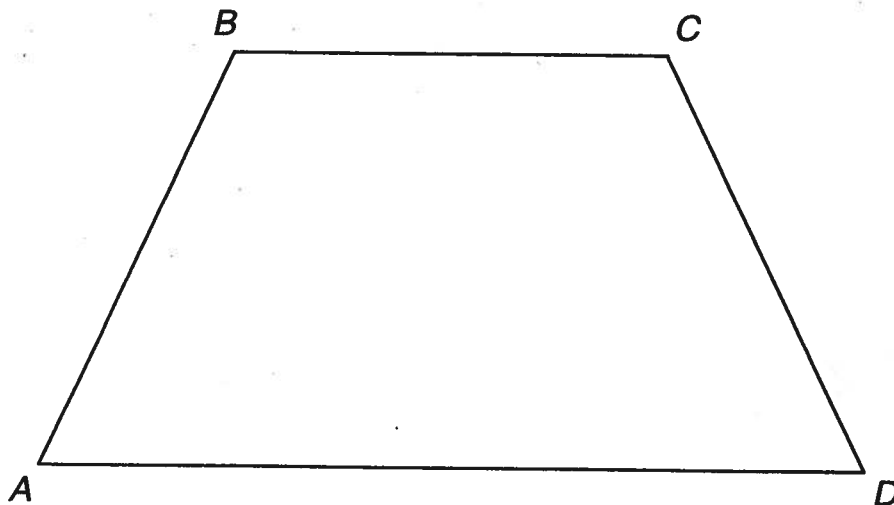
7. Side ZW 3 in



Name \_\_\_\_\_

### Power Practice

Use an inch ruler to measure the length of the indicated side.

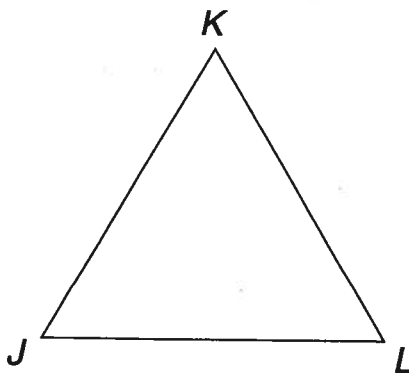


8. Side BA  $2\frac{3}{8}$  in

9. Side BC  $2\frac{1}{2}$  in

10. Side CD  $2\frac{3}{8}$  in

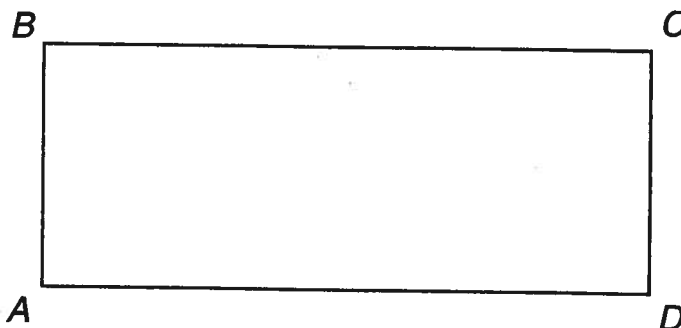
11. Side AD  $4\frac{1}{4}$  in



12. Side KJ  $1\frac{3}{4}$  in

13. Side KL  $1\frac{3}{4}$  in

14. Side JL  $1\frac{3}{4}$  in



15. Side BA  $1\frac{1}{8}$  in

16. Side CD  $1\frac{1}{8}$  in

17. Side AD  $3\frac{1}{8}$  in

18. Side BC  $3\frac{1}{8}$  in

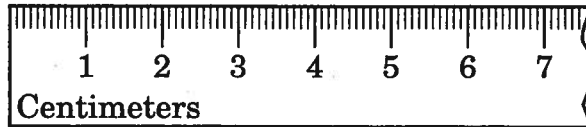


# Metric Measurement

## Learn

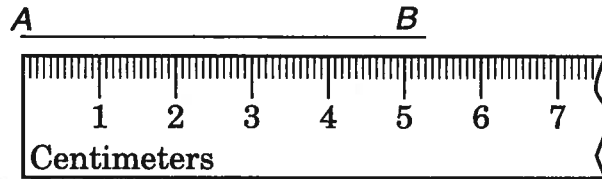
You can use a centimeter ruler to measure length in metric units.

A centimeter ruler is divided into centimeters (cm) and millimeters (mm). There are 10 mm in 1 centimeter.



**What Can I Do?**  
I want to find a length in metric units.

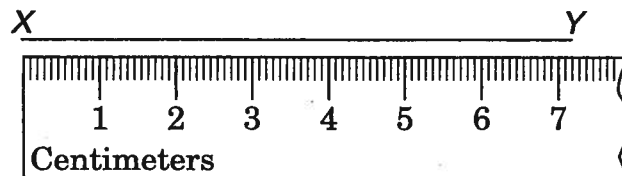
- Find the length of line segment *AB* to the nearest centimeter and then in millimeters.



To the nearest centimeter, the length of line segment *AB* is 5 cm.

In millimeters, the length of line segment *AB* is 53 mm.

**Try It** • Use a centimeter ruler to find the length of line segment *XY* to the nearest centimeter and then in millimeters.

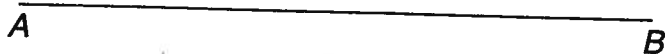


1. nearest centimeter 7      2. in millimeters 72

Name \_\_\_\_\_

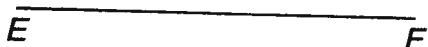
### Power Practice

Use a centimeter ruler to find the length of each line segment to the nearest centimeter and then in millimeters.



3. nearest centimeter 8.4

4. in millimeters 84



5. nearest centimeter 5.2

6. in millimeters 52



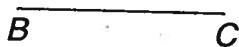
7. nearest centimeter 4.5

8. in millimeters 45



9. nearest centimeter 7

10. in millimeters 70



11. nearest centimeter 2.8

12. in millimeters 28



13. nearest centimeter 3.8

14. in millimeters 38