

Rising 6th
Summer Work

Dear Students,

Attached is a summer practice packet for math. This packet contains topics and math problems for you to work on during the summer. It is recommended that you begin work on the packet by the beginning of July and complete one or two topics per day. You should work with your parents to set up a schedule for the summer that includes some time for math practice each day. I suggest that you complete all of your work in a notebook so you can keep track of everything you have done.

If you have difficulty with a topic, look for online videos through Khan Academy or Math Antics that might help you. You can also reach out to family members or friends for assistance if needed. The topics covered in the packet are ones that you have completed in previous years. There should not be anything in the packet that you have not been taught in a previous grade. The purpose of the packet is to practice topics that are necessary for you to know to be successful at the next grade level.

By August 1st the answers to all of the problems in the packet will be posted on Mrs. McCarron's web page. You should check your work on the completed topics and rework any problems you have not completed correctly.

Have a happy and safe summer. Please feel free to have your parents reach out to me if you have any questions.

Blessings,

Mrs. McCarron

Name _____

Whole Number Addition

Lesson
5-K

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. $45 + 17$

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

2. $345 + 519$

$$\begin{array}{r} _ _ _ \\ + 519 \\ \hline \end{array}$$

3. $630 + 322$

$$\begin{array}{r} 630 \\ + _ _ _ \\ \hline \end{array}$$

Power Practice Rewrite problems on another paper. Add.

4. $64 + 32 = \underline{\hspace{2cm}}$

5. $85 + 37 = \underline{\hspace{2cm}}$

6. $426 + 358 = \underline{\hspace{2cm}}$

7. $379 + 246 = \underline{\hspace{2cm}}$

8. $365 + 483 = \underline{\hspace{2cm}}$

9. $271 + 396 = \underline{\hspace{2cm}}$

10. $109 + 850 = \underline{\hspace{2cm}}$

11. $211 + 489 = \underline{\hspace{2cm}}$



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.

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

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.

$$\begin{array}{r} \\ 1. \quad 408 \\ \\ 60 \\ \\ 155 \\ + 2,047 \\ \hline 70 \end{array}$$

$$\begin{array}{r} \\ 2. \quad 5,634 \\ \\ 1,866 \\ \\ 93 \\ + 551 \\ \hline 4 \end{array}$$

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

$$\begin{array}{r} \\ 4. \quad 4,683 \\ \\ 5,135 \\ \\ 1,004 \\ + 4,095 \\ \hline 7 \end{array}$$

Power Practice

• Find each sum.

$$5. 95 + 804 + 82 = \underline{\hspace{2cm}}$$

$$6. 382 + 660 + 85 + 2,345 = \underline{\hspace{2cm}}$$

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

$$9. 6,988 + 1,954 + 803 + 5,512 + 444 = \underline{\hspace{2cm}}$$

$$10. 77 + 3,190 + 6,840 + 903 + 5,662 = \underline{\hspace{2cm}}$$

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

$$12. 3,095 + 3,905 + 359 + 395 + 5,955 = \underline{\hspace{2cm}}$$

Name _____

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.

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

Remember to regroup when necessary, before subtracting.

So, $6,042 - 876 = 5,166$

Try It

• Complete the subtraction.

1.
$$\begin{array}{r} 3 \ 10 \\ \cancel{4}\cancel{0}8 \\ - \quad 64 \\ \hline \quad 4 \end{array}$$

2.
$$\begin{array}{r} 3 \ 15 \\ \cancel{6}\cancel{4}5 \\ - \quad 429 \\ \hline \quad 6 \end{array}$$

3.
$$\begin{array}{r} 10 \\ 1 \ 011 \\ \cancel{2},\cancel{1}9 \\ - \quad 987 \\ \hline \quad 32 \end{array}$$

4.
$$\begin{array}{r} 12 \ 9 \\ 3 \ 210 \ 12 \\ \cancel{4},\cancel{3}\cancel{0}2 \\ - \quad 3,945 \\ \hline \quad 7 \end{array}$$

Power Practice

• Find each difference.

5. $950 - 78 =$ _____ 6. $414 - 386 =$ _____ 7. $732 - 581 =$ _____

8. $3,149 - 875 =$ _____ 9. $8,047 - 5,897 =$ _____ 10. $6,324 - 5,849 =$ _____

11. $7,002 - 583 =$ _____ 12. $4,513 - 686 =$ _____ 13. $2,301 - 1,743 =$ _____

14. $9,432 - 87 =$ _____ 15. $6,315 - 5,908 =$ _____ 16. $8,920 - 7,945 =$ _____

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.

$$\begin{array}{r} ^2 \\ 438 \\ \times 3 \\ \hline 1,314 \end{array}$$

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

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

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

What Can I Do?

I want to find a product.



Try It

• Complete the multiplication.

$$\begin{array}{r} ^2 \\ 352 \\ \times 4 \\ \hline 08 \end{array}$$

$$\begin{array}{r} ^5 \\ 719 \\ \times 6 \\ \hline 14 \end{array}$$

$$\begin{array}{r} ^1 \\ 85 \\ \times 24 \\ \hline 340 \\ \hline 00 \end{array}$$

$$\begin{array}{r} ^2 \\ 59 \\ \times 63 \\ \hline 177 \\ \hline \end{array}$$

Power Practice

• Find each product.

5. $4 \times 87 =$ _____ 6. $6 \times 75 =$ _____ 7. $8 \times 46 =$ _____

8. $9 \times 163 =$ _____ 9. $8 \times 628 =$ _____ 10. $4 \times 505 =$ _____

11. $13 \times 58 =$ _____ 12. $95 \times 47 =$ _____ 13. $28 \times 82 =$ _____

14. $52 \times 31 =$ _____ 15. $14 \times 68 =$ _____ 16. $37 \times 77 =$ _____

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

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

THINK: Bring down 6 tens.
Divide 16 *tens* by 4.
 $4 \times 4 = 16$ $16 - 16 = 0$

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

THINK: Bring down 8 ones.
Divide 8 *ones* by 4.
 $4 \times 2 = 8$ $8 - 8 = 0$ No Remainder

Try It • Complete the division

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

$$2. \begin{array}{r} 30 \\ 3 \overline{)929} \\ - 9 \\ \hline 029 \\ - 27 \\ \hline 2 \end{array}$$

$$3. \begin{array}{r} 1,4 \\ 5 \overline{)7,145} \\ - 5 \\ \hline 21 \\ - 20 \\ \hline \end{array}$$

$$4. \begin{array}{r} 63 \\ 9 \overline{)5,758} \\ - 54 \\ \hline 35 \\ - 27 \\ \hline \end{array}$$

Name _____

Power Practice

• Divide. Write the quotient and remainder.

5. $3 \overline{)197}$

6. $7 \overline{)931}$

7. $6 \overline{)804}$

8. $5 \overline{)296}$

9. $2 \overline{)4,767}$

10. $3 \overline{)7,135}$

11. $4 \overline{)6,071}$

12. $6 \overline{)8,439}$

13. $5 \overline{)3,195}$

14. $8 \overline{)4,327}$

15. $9 \overline{)6,444}$

16. $5 \overline{)5,020}$

17. $7 \overline{)8,405}$

18. $9 \overline{)7,309}$

19. $4 \overline{)3,256}$

20. $6 \overline{)4,000}$

Plotting Points on a Coordinate Grid

Learn

What Can I Do?

I want to plot a point for an ordered pair.

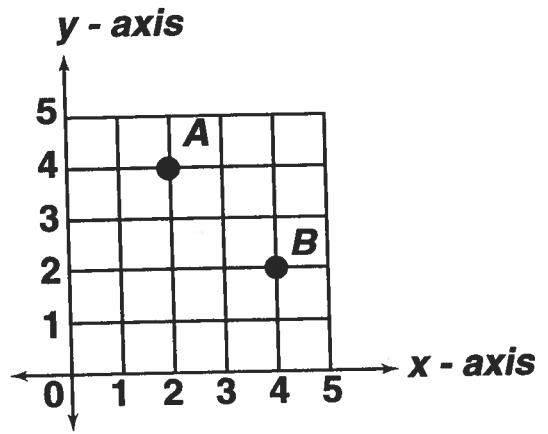


Use a Coordinate Grid

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).



Try It

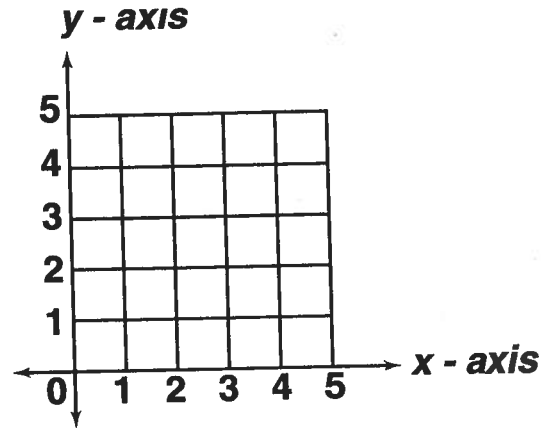
• Use the ordered pair to complete the sentence. Then plot each point on the grid.

Point F (3,1)

- To plot point F,
move _____ units across the *x*-axis,
and _____ unit up the *y*-axis.

Point G (1, 5)

- To plot point G,
move 1 unit _____ the *x*-axis,
and 5 units _____ 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)

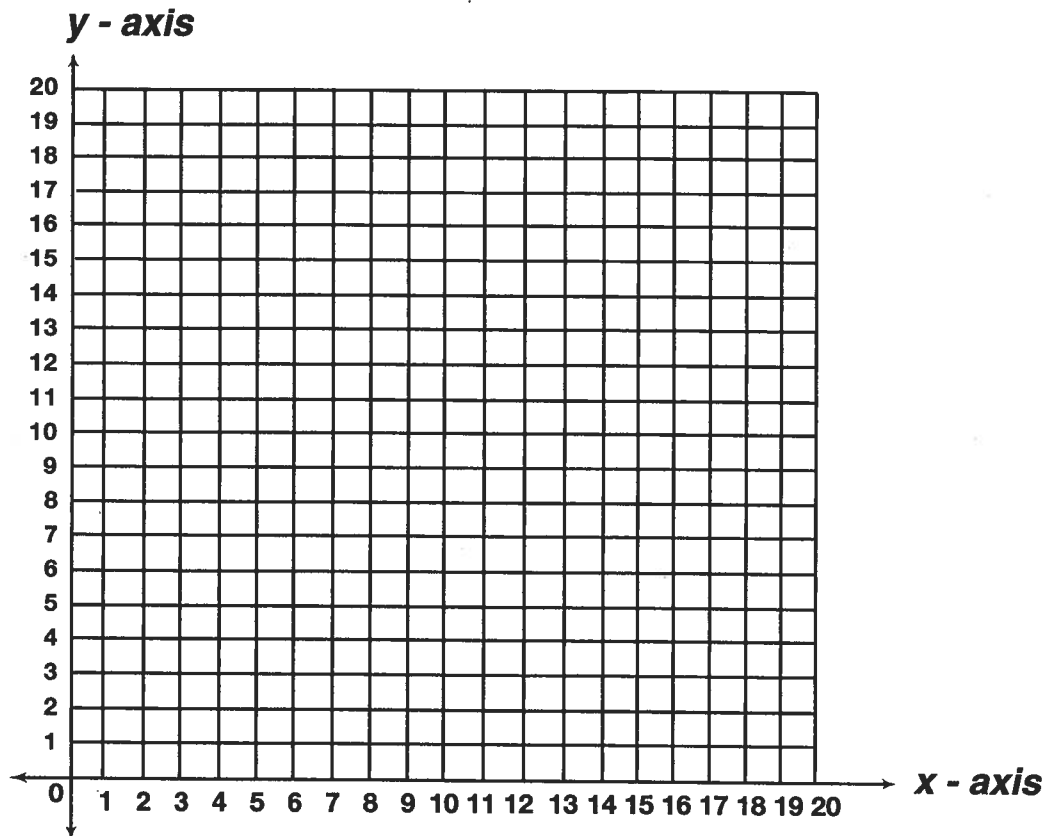
10. Point S (3, 10)

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? _____

16. What point lies on the y -axis? _____

17. Which point is the farthest across the grid? _____

18. Which point is the highest up the grid? _____

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.

$$\begin{array}{r} 9 \\ \cancel{10} 11 \\ 2,3\cancel{0}1 \\ - 135 \\ \hline \end{array}$$

Regroup hundreds as tens, then tens as ones.

$$\begin{array}{r} 9 \\ 2 \cancel{10} 11 \\ 2,3\cancel{0}1 \\ - 135 \\ \hline 2,166 \end{array}$$

Subtract

Try It

• Complete to find each sum or difference.

$$1. \begin{array}{r} 1 \\ 205 \\ + 127 \\ \hline 2 \end{array}$$

$$2. \begin{array}{r} 1016 \\ 316 \\ - 128 \\ \hline 8 \end{array}$$

$$3. \begin{array}{r} 1 \\ 416 \\ + 166 \\ \hline 2 \end{array}$$

$$4. \begin{array}{r} 1115 \\ 525 \\ - 426 \\ \hline 9 \end{array}$$

Name _____

Power Practice

• Find each sum or difference.

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

$$\begin{array}{r} 6. \quad 403 \\ - 221 \\ \hline \end{array}$$

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

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

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

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

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

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

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

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

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

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

$$17. \quad 3,000 - 188 = \underline{\hspace{2cm}}$$

$$18. \quad 13,021 - 7,896 = \underline{\hspace{2cm}}$$

$$19. \quad 2,788 + 349 = \underline{\hspace{2cm}}$$

$$20. \quad 11,110 - 379 = \underline{\hspace{2cm}}$$

$$21. \quad 876 + 549 = \underline{\hspace{2cm}}$$

$$22. \quad 39 + 387 + 84 = \underline{\hspace{2cm}}$$

$$23. \quad 1,345 + 4,579 = \underline{\hspace{2cm}}$$

$$24. \quad 5,678 - 1,349 = \underline{\hspace{2cm}}$$

$$25. \quad 8,999 + 346 = \underline{\hspace{2cm}}$$

$$26. \quad 678 - 99 = \underline{\hspace{2cm}}$$

$$27. \quad 5,765 - 198 = \underline{\hspace{2cm}}$$

$$28. \quad 5,609 + 1,189 + 57 = \underline{\hspace{2cm}}$$

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.

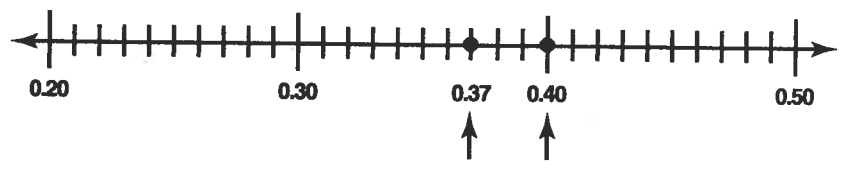
- For the first round, mix up the three sets of cards. Then each player draws 8 cards.
- Each player uses 6 of the 8 cards to make two 3-digit numbers that have a sum as close to 1,000 as possible.
- Each player records his or her 3-digit numbers and sums. Then each one subtracts the sum from 1,000.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

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

3.06

3.6

3.6

2.8

2.8

Think:

Think:

 $2 < 3$ $0 < 6$

2.8 is the least.

 $3.06 < 3.6$

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 _____

2. 0.14, 0.32, 0.19 _____

3. 5.6, 5.45, 5.47 _____

4. 1.2, 1.6, 1.53, 1.41 _____

5. 0.42, 0.5, 0.53, 0.48 _____

6. 0.7, 1.4, 0.99, 1.26 _____

Power Practice

• Order from least to greatest.

7. 0.33, 0.71, 0.17, 0.2 _____

8. 2.1, 0.67, 1.9, 2.06 _____

9. 1.65, 3.04, 2.67, 3.1 _____

10. 0.2, 0.11, 0.04, 0.17 _____

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

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: $0.5 = 0.50$

$$\begin{array}{r} 0.50 \\ + 0.78 \\ \hline 8 \end{array}$$

Add the tenths.
Regroup.

$$\begin{array}{r} 1 \\ 0.50 \\ + 0.78 \\ \hline 28 \end{array}$$

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.

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

Regroup to subtract the hundredths.

$$\begin{array}{r} 413 \\ 0.53 \\ - 0.28 \\ \hline 5 \end{array}$$

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.

1.
$$\begin{array}{r} 1 \\ 0.25 \\ + 0.19 \\ \hline 4 \end{array}$$

2.
$$\begin{array}{r} 115 \\ 0.25 \\ - 0.19 \\ \hline 6 \end{array}$$

3.
$$\begin{array}{r} 1 \\ 0.54 \\ + 0.37 \\ \hline 1 \end{array}$$

4.
$$\begin{array}{r} 414 \\ 0.54 \\ - 0.37 \\ \hline 7 \end{array}$$

5.
$$\begin{array}{r} 0.64 \\ + 0.36 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 0.64 \\ - 0.36 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 0.3 \\ + 0.84 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 0.6 \\ - 0.49 \\ \hline \end{array}$$

Name _____

Power Practice

• Find each sum or difference.

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

$$\begin{array}{r} 10. \quad 4.32 \\ - 1.83 \\ \hline \end{array}$$

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

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

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

$$\begin{array}{r} 14. \quad 2.78 \\ - 1.09 \\ \hline \end{array}$$

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

$$\begin{array}{r} 16. \quad 4.77 \\ - 0.99 \\ \hline \end{array}$$

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

$$\begin{array}{r} 18. \quad 6.22 \\ - 2.19 \\ \hline \end{array}$$

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

$$\begin{array}{r} 20. \quad 4.55 \\ - 3.91 \\ \hline \end{array}$$

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

$$\begin{array}{r} 22. \quad 6.30 \\ - 0.77 \\ \hline \end{array}$$

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

$$\begin{array}{r} 24. \quad 4.59 \\ - 3.85 \\ \hline \end{array}$$

$$25. \quad 34.09 + 1.9 = \underline{\hspace{2cm}}$$

$$26. \quad 139.0090 - 0.56 = \underline{\hspace{2cm}}$$

$$27. \quad 33.999 + 23.11 + 134.11 = \underline{\hspace{2cm}}$$

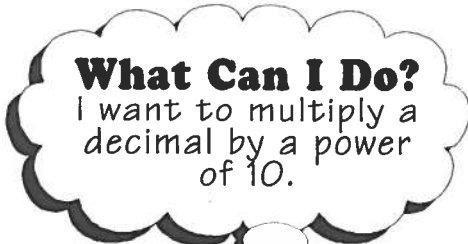
$$28. \quad 302.22 - 8.19 = \underline{\hspace{2cm}}$$

$$29. \quad 103.47 + 0.99 = \underline{\hspace{2cm}}$$

$$30. \quad 45.7 - 0.001 = \underline{\hspace{2cm}}$$

Multiplying Decimals by Powers of 10

Learn



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.

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. $1 \times 0.045 = 0.045$

$$10 \times 0.045 = 0.45$$

$$100 \times 0.045 = \underline{\hspace{2cm}}$$

$$1,000 \times 0.045 = \underline{\hspace{2cm}}$$

2. $1 \times 0.56 = 0.56$

$$10 \times 0.56 = \underline{\hspace{2cm}}$$

$$100 \times 0.56 = \underline{\hspace{2cm}}$$

$$1,000 \times 0.56 = \underline{\hspace{2cm}}$$

3. $1 \times 1.7 = 1.7$

$$10 \times 1.7 = \underline{\hspace{2cm}}$$

$$100 \times 1.7 = \underline{\hspace{2cm}}$$

$$1,000 \times 1.7 = \underline{\hspace{2cm}}$$

Power Practice • Multiply.

4. $10 \times 0.08 = \underline{\hspace{2cm}}$

5. $100 \times 0.07 = \underline{\hspace{2cm}}$

6. $10 \times 2.6 = \underline{\hspace{2cm}}$

7. $100 \times 5.13 = \underline{\hspace{2cm}}$

8. $1,000 \times 0.25 = \underline{\hspace{2cm}}$

9. $1,000 \times 0.079 = \underline{\hspace{2cm}}$

10. $10 \times 8.01 = \underline{\hspace{2cm}}$

11. $100 \times 3.004 = \underline{\hspace{2cm}}$

12. $1,000 \times 0.456 = \underline{\hspace{2cm}}$

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. 100×6

_____ zeros

2. 100×3

_____ zeros

3. 10×2

_____ zero

4. 10×7

_____ zero

5. 4×100

_____ zeros

6. 9×10

_____ zero

7. 8×100

_____ zeros

8. 5×10

_____ zero

Power Practice Multiply.

9. $10 \times 8 =$ _____

10. $4 \times 10 =$ _____

11. $100 \times 5 =$ _____

12. $6 \times 100 =$ _____

13. $100 \times 4 =$ _____

14. $7 \times 10 =$ _____

15. $10 \times 2 =$ _____

16. $5 \times 10 =$ _____

17. $100 \times 9 =$ _____

18. $7 \times 100 =$ _____

19. $100 \times 8 =$ _____

20. $9 \times 10 =$ _____

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.

So, $642.3 \div 1,000 = 0.6423$

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. $7.14 \div 1 = 7.14$

$$670.8 \div 10 = 67.08$$

$$43.2 \div 10 = \underline{\hspace{2cm}}$$

$$7.14 \div 10 = \underline{\hspace{2cm}}$$

$$670.8 \div 100 = \underline{\hspace{2cm}}$$

$$43.2 \div 100 = \underline{\hspace{2cm}}$$

$$7.14 \div 100 = \underline{\hspace{2cm}}$$

$$670.8 \div 1,000 = \underline{\hspace{2cm}}$$

$$43.2 \div 1,000 = \underline{\hspace{2cm}}$$

$$7.14 \div 1,000 = \underline{\hspace{2cm}}$$

Power Practice • Divide.

4. $54.8 \div 10 = \underline{\hspace{2cm}}$

5. $356.1 \div 10 = \underline{\hspace{2cm}}$

6. $40.19 \times 100 = \underline{\hspace{2cm}}$

7. $371.4 \div 100 = \underline{\hspace{2cm}}$

8. $802.1 \div 1,000 = \underline{\hspace{2cm}}$

9. $7.85 \div 10 = \underline{\hspace{2cm}}$

10. $3.27 \div 100 = \underline{\hspace{2cm}}$

11. $14.03 \div 1,000 = \underline{\hspace{2cm}}$

Name _____

Write a Multiplication or Division Number Sentence



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 _____

2. Divide 20 by 5 _____

3. Find the product of 10 and 8 _____

4. Find the quotient of 30 and 3 _____

5. Divide 100 by 10 _____

6. Find the quotient of 28 and 2 _____

7. Find the product of 7 and 9 _____

8. Multiply 12 by 4 _____

Factors

Learn

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.

What Can I Do?
I want to list all the factors of a number.



Try It

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

1. $20 = 1 \times \underline{\hspace{2cm}}$

$20 = 2 \times \underline{\hspace{2cm}}$

$20 = 4 \times \underline{\hspace{2cm}}$

Factors of 20:

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

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

$32 = \underline{\hspace{2cm}} \times 8$

Factors of 32:

3. $45 = 1 \times \underline{\hspace{2cm}}$

$45 = \underline{\hspace{2cm}} \times 15$

$45 = 5 \times \underline{\hspace{2cm}}$

Factors of 45:

Power Practice

• List all the factors of each number.

4. 27 _____

5. 19 _____

6. 71 _____

7. 35 _____

8. 68 _____

9. 55 _____

10. 47 _____

11. 33 _____

12. 53 _____

13. 48 _____

14. 88 _____

Name _____

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?

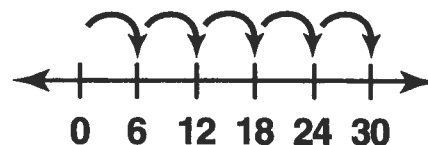
Multiply by Factors of 1–5

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

$$\begin{aligned} 1 \times 6 &= 6 \\ 2 \times 6 &= 12 \\ 3 \times 6 &= 18 \\ 4 \times 6 &= 24 \\ 5 \times 6 &= 30 \end{aligned}$$

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. $\begin{array}{r} 4 \\ \times 1 \\ \hline \end{array}$ $\begin{array}{r} 4 \\ \times 2 \\ \hline \end{array}$ $\begin{array}{r} 4 \\ \times 3 \\ \hline \end{array}$ $\begin{array}{r} 4 \\ \times 4 \\ \hline \end{array}$ $\begin{array}{r} 4 \\ \times 5 \\ \hline \end{array}$ First 5 multiples of 4: _____

2. 15, 30, 45, _____, _____ First 5 multiples of 15: _____

Power Practice

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

3. 3 _____ 4. 5 _____ 5. 8 _____

6. 10 _____ 7. 40 _____ 8. 22 _____

9. 25 _____ 10. 18 _____ 11. 16 _____

12. 60 _____ 13. 24 _____ 14. 32 _____

Greatest Common Factor

Learn

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

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.

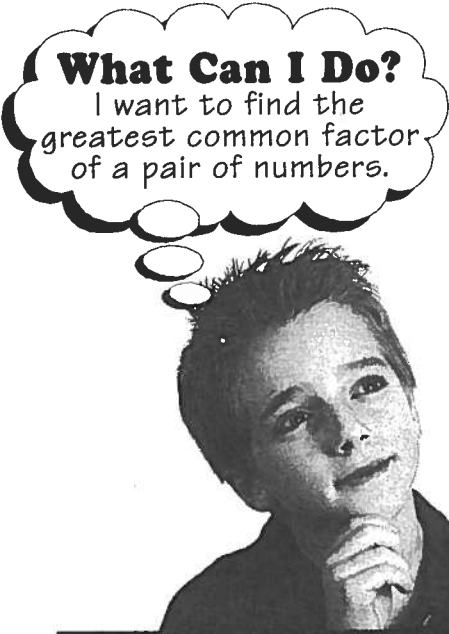
24: 1, 2, 3, 4, 6, 8, 12, 24

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: _____

common factors of 4 and 20: _____

GCF of 4 and 20: _____

2. 25 and 40

factors of 25: 1, 5, 25

factors of 40: _____

common factors of 25 and 40: _____

GCF of 25 and 40: _____

3. 15 and 45

factors of 15:

factors of 40:

common factors of 15 and 40: _____

GCF of 15 and 40: _____

4. 28 and 42

factors of 28:

factors of 32:

common factors of 28 and 32: _____

GCF of 28 and 32: _____

Name _____

Power Practice • Find the greatest common factor.

5. 8 and 64 _____

6. 5 and 35 _____

7. 8 and 48 _____

8. 10 and 55 _____

9. 30 and 75 _____

10. 28 and 63 _____

11. 27 and 72 _____

12. 18 and 60 _____

13. 24 and 78 _____

14. 14 and 56 _____

15. 72 and 96 _____

16. 88 and 96 _____

17. 55 and 65 _____

18. 40 and 100 _____

19. 54 and 63 _____

Least Common Multiples

Learn



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, _____

multiples of 4:

4, 8, _____, 16, _____, _____

common multiples of 3 and 4:

LCM of 3 and 4: _____

2. 5 and 10

multiples of 5:

5, 10, 15, 20, _____, _____, _____

multiples of 10:

10, _____, _____, _____

common multiples of 5 and 10:

LCM of 5 and 10: _____

3. 6 and 12

multiples of 6:

_____, _____, _____, _____

multiples of 12:

_____, _____, _____, _____

common multiples of 6 and 12:

LCM of 6 and 12: _____

4. 14 and 28

multiples of 14:

_____, _____, _____, _____

multiples of 28:

_____, _____, _____, _____

common multiples of 14 and 28:

LCM of 14 and 28: _____

Name _____

Power Practice

• Find the least common multiple.

5. 7 and 21 _____

6. 5 and 25 _____

7. 6 and 8 _____

8. 2 and 12 _____

9. 4 and 10 _____

10. 8 and 12 _____

11. 3 and 7 _____

12. 14 and 35 _____

13. 30 and 45 _____

14. 13 and 52 _____

15. 8 and 28 _____

16. 12 and 18 _____

17. 9 and 24 _____

18. 20 and 32 _____

19. 5 and 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.

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

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

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

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

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

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

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

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

Name _____

Power Practice

• Write in simplest form.

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

10. $\frac{12}{48} =$ _____

11. $\frac{21}{30} =$ _____

12. $\frac{20}{45} =$ _____

13. $\frac{11}{55} =$ _____

14. $\frac{24}{48} =$ _____

15. $\frac{9}{63} =$ _____

16. $\frac{12}{60} =$ _____

17. $\frac{10}{74} =$ _____

18. $\frac{24}{56} =$ _____

19. $\frac{13}{39} =$ _____

20. $\frac{28}{46} =$ _____

21. $\frac{16}{80} =$ _____

22. $\frac{32}{84} =$ _____

23. $\frac{15}{70} =$ _____

24. $\frac{26}{52} =$ _____

25. $\frac{17}{68} =$ _____

26. $\frac{35}{55} =$ _____

27. $\frac{48}{80} =$ _____

28. $\frac{84}{96} =$ _____

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

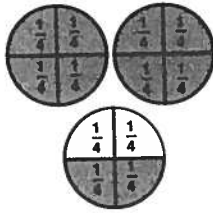
Learn

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.

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

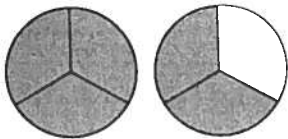
Think: Express the remainder as a fraction, where the remainder is the numerator and the divisor is the denominator.

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

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.

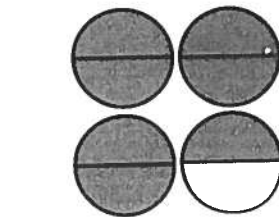


1. $\frac{5}{3} = ?$

_____ whole circle is shaded.

_____ of the last circle is shaded.

$$\frac{5}{3} = \underline{\hspace{2cm}}$$

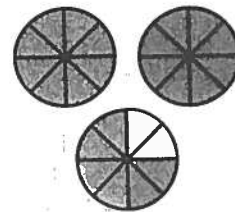


2. $\frac{7}{2} = ?$

_____ whole circles are shaded.

_____ of the last circle is shaded.

$$\frac{7}{2} = \underline{\hspace{2cm}}$$



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

_____ whole circles are shaded.

_____ of the last circle is shaded.

$$\frac{22}{8} = \underline{\hspace{2cm}}$$

Name _____

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

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

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

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

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

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

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

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

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

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

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

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

$\frac{33}{6} = 5 \frac{\quad}{6} = 5 \frac{\quad}{2}$

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

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

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

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

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

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

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

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

$\frac{33}{9} = 3 \frac{\quad}{9} = 3 \frac{\quad}{3}$

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

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

$\frac{50}{12} = 4 \frac{\quad}{12} = 4 \frac{\quad}{6}$

Power Practice

Write as a whole or mixed number in simplest form.

12. $\frac{10}{3} = \underline{\quad}$

13. $\frac{17}{4} = \underline{\quad}$

14. $\frac{30}{8} = \underline{\quad}$

15. $\frac{15}{5} = \underline{\quad}$

16. $\frac{30}{7} = \underline{\quad}$

17. $\frac{19}{3} = \underline{\quad}$

18. $\frac{40}{8} = \underline{\quad}$

19. $\frac{25}{6} = \underline{\quad}$

20. $\frac{35}{2} = \underline{\quad}$

21. $\frac{21}{6} = \underline{\quad}$

22. $\frac{44}{9} = \underline{\quad}$

23. $\frac{27}{12} = \underline{\quad}$

24. $\frac{41}{6} = \underline{\quad}$

25. $\frac{66}{9} = \underline{\quad}$

26. $\frac{84}{7} = \underline{\quad}$

27. $\frac{34}{6} = \underline{\quad}$

28. $\frac{33}{3} = \underline{\quad}$

29. $\frac{60}{8} = \underline{\quad}$

30. $\frac{55}{4} = \underline{\quad}$

31. $\frac{65}{5} = \underline{\quad}$

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

33. $\frac{28}{6} = \underline{\quad}$

34. $\frac{27}{16} = \underline{\quad}$

35. $\frac{80}{12} = \underline{\quad}$

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

$$5 \overline{) 13}$$

$$\frac{13}{5} = \underline{\hspace{2cm}}$$

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

$$9 \overline{) 42}$$

$$\frac{42}{9} = \underline{\hspace{2cm}}$$

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

3. $\frac{29}{8} = \underline{\hspace{2cm}}$

4. $\frac{57}{6} = \underline{\hspace{2cm}}$

5. $\frac{17}{3} = \underline{\hspace{2cm}}$

6. $\frac{27}{5} = \underline{\hspace{2cm}}$

7. $\frac{38}{6} = \underline{\hspace{2cm}}$

8. $\frac{35}{5} = \underline{\hspace{2cm}}$

Name _____

9. $\frac{44}{8} = \underline{\hspace{2cm}}$

10. $\frac{75}{9} = \underline{\hspace{2cm}}$

11. $\frac{63}{5} = \underline{\hspace{2cm}}$

12. $\frac{81}{8} = \underline{\hspace{2cm}}$

13. $\frac{36}{12} = \underline{\hspace{2cm}}$

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

15. $\frac{25}{3} = \underline{\hspace{2cm}}$

16. $\frac{69}{10} = \underline{\hspace{2cm}}$

17. $\frac{72}{8} = \underline{\hspace{2cm}}$

18. $\frac{46}{7} = \underline{\hspace{2cm}}$

19. $\frac{53}{6} = \underline{\hspace{2cm}}$

20. $\frac{80}{9} = \underline{\hspace{2cm}}$

21. $\frac{37}{4} = \underline{\hspace{2cm}}$

22. $\frac{65}{5} = \underline{\hspace{2cm}}$

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.

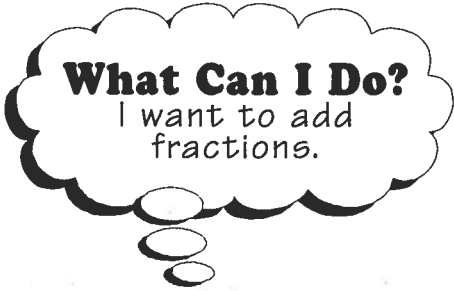
Learn Adding Fractions

Use These Steps

Add the numerators.

Use the common denominator.

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

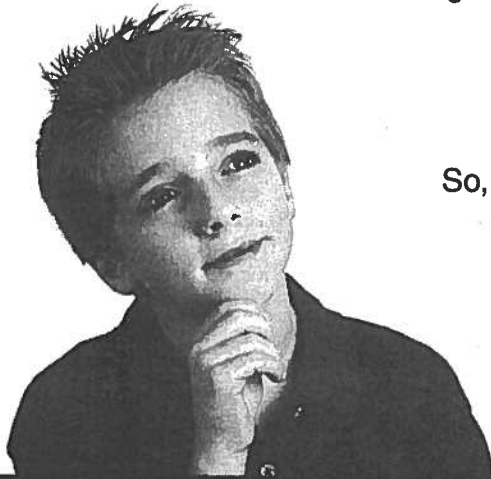


Write the sum in simplest form

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



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



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

1.
$$\begin{array}{r} \frac{2}{8} \\ + \frac{3}{8} \\ \hline \end{array}$$

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

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

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

1

Name _____

Power Practice

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

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

$$+ \frac{2}{5}$$

$$4. \quad \frac{3}{8}$$

$$+ \frac{3}{8}$$

$$5. \quad \frac{1}{10}$$

$$+ \frac{7}{10}$$

$$6. \quad \frac{7}{9}$$

$$+ \frac{5}{9}$$

$$7. \quad \frac{5}{12}$$

$$+ \frac{5}{12}$$

$$8. \quad \frac{3}{5}$$

$$+ \frac{1}{5}$$

$$9. \quad \frac{3}{4}$$

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

$$10. \quad \frac{7}{10}$$

$$+ \frac{9}{10}$$

$$11. \quad \frac{5}{6}$$

$$+ \frac{5}{6}$$

$$12. \quad \frac{5}{12}$$

$$+ \frac{7}{12}$$

$$13. \quad \frac{2}{5}$$

$$+ \frac{3}{5}$$

$$14. \quad \frac{5}{9}$$

$$+ \frac{8}{9}$$

$$15. \quad \frac{7}{8}$$

$$+ \frac{3}{8}$$

$$16. \quad \frac{5}{12}$$

$$+ \frac{1}{12}$$

$$17. \quad \frac{3}{10}$$

$$+ \frac{7}{10}$$

$$18. \quad \frac{1}{9}$$

$$+ \frac{5}{9}$$

$$19. \quad \frac{7}{8}$$

$$+ \frac{5}{8}$$

$$20. \quad \frac{6}{11}$$

$$+ \frac{5}{11}$$

$$21. \quad \frac{4}{5}$$

$$+ \frac{3}{5}$$

$$22. \quad \frac{5}{16}$$

$$+ \frac{13}{16}$$

$$23. \quad \frac{4}{9} + \frac{7}{9} = \underline{\hspace{2cm}}$$

$$24. \quad \frac{3}{8} + \frac{6}{8} = \underline{\hspace{2cm}}$$

$$25. \quad \frac{5}{10} + \frac{3}{10} = \underline{\hspace{2cm}}$$

Subtracting Fractions

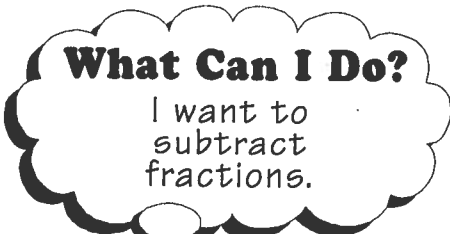
Learn

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

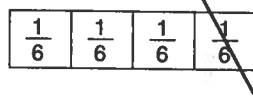
Use These Steps

Subtract the numerators.

Use the common denominator.

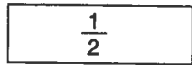
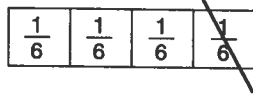


$$\frac{4}{6} - \frac{1}{6} = \frac{3}{6}$$



Write the difference in simplest form.

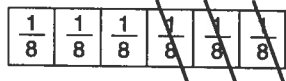
$$\frac{3}{6} = \frac{1}{2}$$



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

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

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



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



$$\text{---} = \frac{\quad}{4} \quad \boxed{\frac{1}{4}}$$

Name _____

Power Practice

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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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**

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

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.

$$1. \frac{1}{7} + \frac{4}{7} = \underline{\hspace{2cm}}$$

$$2. \frac{3}{4} + \frac{3}{4} = \underline{\hspace{2cm}}$$

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

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

$$= \frac{5}{12} + \frac{\hspace{1cm}}{12} = \frac{\hspace{1cm}}{12}$$

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

$$= \underline{\hspace{2cm}}$$

$$= \underline{\hspace{2cm}}$$

Power Practice

- Add. Write the sum in simplest form.

$$5. \frac{1}{9} + \frac{5}{9} = \underline{\hspace{2cm}}$$

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

$$7. \frac{1}{8} + \frac{5}{8} = \underline{\hspace{2cm}}$$

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

$$9. \frac{2}{4} + \frac{3}{4} = \underline{\hspace{2cm}}$$

$$10. \frac{3}{7} + \frac{6}{7} = \underline{\hspace{2cm}}$$

$$11. \frac{2}{5} + \frac{7}{10} = \underline{\hspace{2cm}}$$

$$12. \frac{5}{6} + \frac{4}{9} = \underline{\hspace{2cm}}$$

$$13. \frac{1}{2} + \frac{1}{8} = \underline{\hspace{2cm}}$$

$$14. \frac{3}{8} + \frac{3}{6} = \underline{\hspace{2cm}}$$

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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. $\frac{7}{8} - \frac{3}{8} =$ _____

2. $\frac{5}{9} - \frac{2}{9} =$ _____

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

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

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

$\frac{1}{12} - \frac{1}{12} = \frac{\quad}{12}$

Power Practice

• Subtract. Write the difference in simplest form.

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

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

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

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

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

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

11. $\frac{21}{40} - \frac{15}{40} =$ _____

12. $\frac{21}{30} - \frac{5}{30} =$ _____

13. $\frac{21}{24} - \frac{5}{24} =$ _____

14. $\frac{7}{10} - \frac{1}{5} =$ _____

15. $\frac{5}{6} - \frac{2}{9} =$ _____

16. $\frac{3}{4} - \frac{1}{3} =$ _____

17. $\frac{5}{8} - \frac{1}{2} =$ _____

18. $\frac{5}{6} - \frac{3}{8} =$ _____

19. $\frac{3}{4} - \frac{2}{5} =$ _____

20. $\frac{1}{2} - \frac{3}{10} =$ _____

21. $\frac{3}{4} - \frac{7}{10} =$ _____

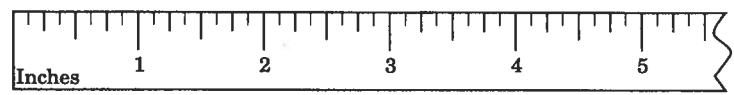
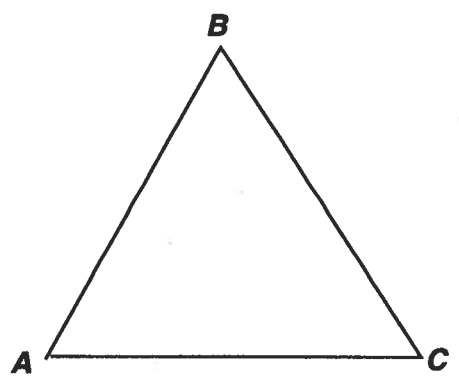
22. $\frac{4}{5} - \frac{2}{3} =$ _____

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.

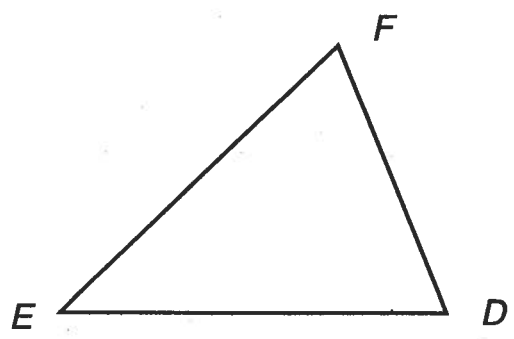


- Find the length of side AC of triangle ABC.

Side CA of triangle ABC measures 3 inches.

Try It

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



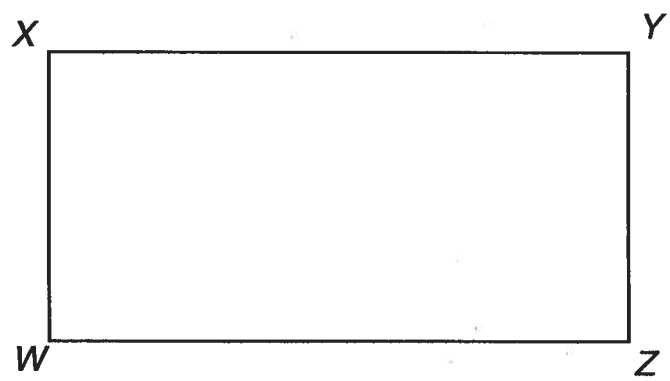
1. Side ED _____
2. Side EF _____
3. Side DF _____

4. Side YZ _____

5. Side WX _____

6. Side XY _____

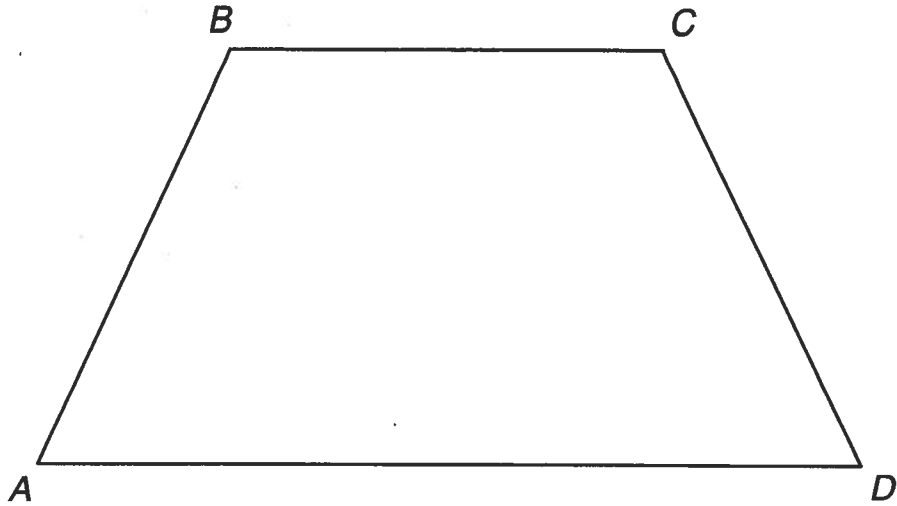
7. Side ZW _____



Name _____

Power Practice

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

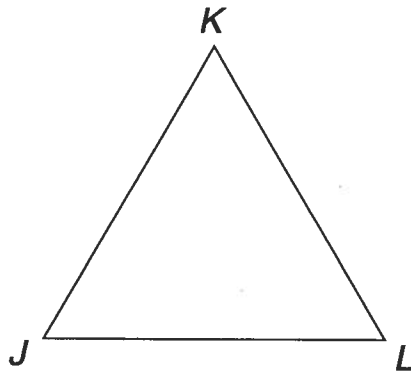


8. Side *BA* _____

9. Side *BC* _____

10. Side *CD* _____

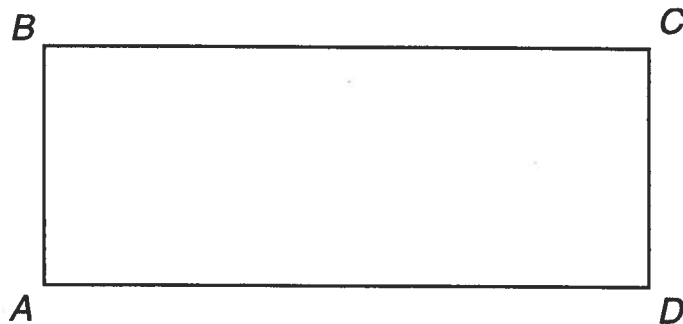
11. Side *AD* _____



12. Side *KJ* _____

13. Side *KL* _____

14. Side *JL* _____



15. Side *BA* _____

16. Side *CD* _____

17. Side *AD* _____

18. Side *BC* _____

Metric Measurement

Learn

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

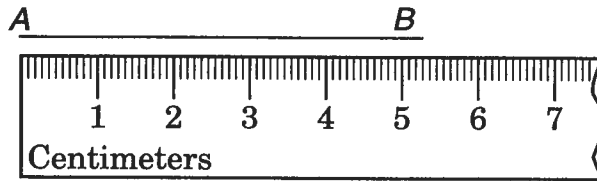
A centimeter ruler is divided into centimeters (cm) and millimeters (mm). There are 10 mm in 1 centimeter.



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



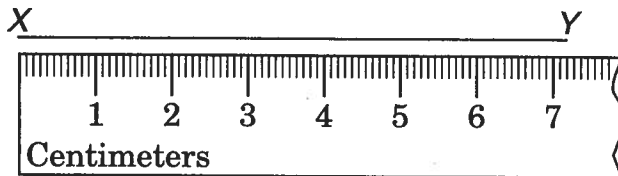
- Find the length of line segment *AB* to the nearest centimeter and then in millimeters.



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 _____ 2. in millimeters _____

Name _____

Power Practice

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

\overline{AB}

3. nearest centimeter _____

4. in millimeters _____

\overline{EF}

5. nearest centimeter _____

6. in millimeters _____

\overline{MN}

7. nearest centimeter _____

8. in millimeters _____

\overline{KL}

9. nearest centimeter _____

10. in millimeters _____

\overline{BC}

11. nearest centimeter _____

12. in millimeters _____

\overline{PQ}

13. nearest centimeter _____

14. in millimeters _____