

12



- ☐ Count by 12's to 60.
- ☐ Practice your M and $\times 3$ flash cards for 5 minutes.
- ☐ Do Speed Drill 12 on page 66.
- ☐ Record your score in the graph on page 60.

Measuring Length

Two Measurement Systems

Different countries use different measures. People in the United States measure length with inches, feet, yards, and miles. These are U.S. measures. Other countries measure length with millimeters, centimeters, meters, and kilometers. The meter is part of the metric system. You will learn U.S. measures and metric measures.

A measurement is a **number** followed by a **unit**.

Measures of Length

number unit

6 yards

number unit

4 meters

A **unit of length** always has the same length. A centimeter is a unit of length, because a centimeter always measures the same length. A foot is a unit of length, because a foot always measures the same length.

A tiny flea can jump 13 inches. This is like a man jumping 700 feet.



In the U.S. system of measurement, there are four commonly used units of length. They are inch, foot, yard, and mile.

1 inch (in)

about the width of two fingers

1 foot (ft)

about the length of a man's foot

1 yard (yd)

about the length of a tall man's stride

1 mile (mi)

about the length of nine city blocks

$$1 \text{ ft} = 12 \text{ in}$$

$$1 \text{ yd} = 3 \text{ ft}$$

$$1 \text{ yd} = 36 \text{ in}$$

$$1 \text{ mi} = 5,280 \text{ ft}$$

In the metric system of measurement, there are four commonly used units of length. They are millimeter, centimeter, meter, and kilometer.

1 millimeter (mm)

about the thickness of a dime

1 centimeter (cm)

about the width of your little finger

1 meter (m)

about the length of a tall man's stride

1 kilometer (km)

about the length of five city blocks

$$1 \text{ cm} = 10 \text{ mm}$$

$$1 \text{ m} = 100 \text{ cm}$$

$$1 \text{ m} = 1,000 \text{ mm}$$

$$1 \text{ km} = 1,000 \text{ m}$$

Choose a U.S. unit of length for measuring the following items.

- | | | | |
|----------------------------|----|----|----|
| 1. length of a telephone | in | yd | mi |
| 2. length of a baby's shoe | in | ft | yd |
| 3. length of a river | in | yd | mi |
| 4. height of a pill bottle | yd | in | ft |
| 5. width of a small drawer | yd | mi | ft |

Lesson 12

Choose a metric unit of length for measuring the following items.

- | | | | |
|--|----|----|----|
| 6. width of your eye | cm | m | km |
| 7. distance from 1st Avenue to Main Street | mm | cm | m |
| 8. width of a needle's eye | mm | cm | m |
| 9. depth of the ocean | mm | cm | km |
| 10. height of a building | mm | cm | m |



We Remember

Find the sums and differences.

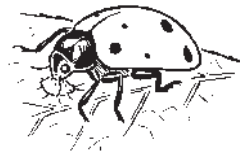
- | | | | | | |
|-----|---|---|---|---|---|
| 11. | $\begin{array}{r} 389 \\ + 471 \\ \hline \end{array}$ | $\begin{array}{r} 645 \\ + 344 \\ \hline \end{array}$ | $\begin{array}{r} 977 \\ - 289 \\ \hline \end{array}$ | $\begin{array}{r} 78 \\ - 24 \\ \hline \end{array}$ | $\begin{array}{r} 481 \\ 279 \\ 192 \\ + 253 \\ \hline \end{array}$ |
|-----|---|---|---|---|---|



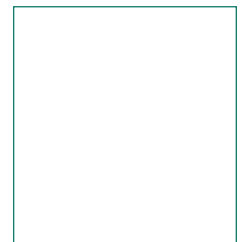
12. Lori Ladybug will eat 210 aphids a week. She still has another 120 aphids to eat. How many has Lori already eaten?

$\boxed{+}$ joining

$\boxed{-}$ taking away
finding more or less
finding the missing part



Solution

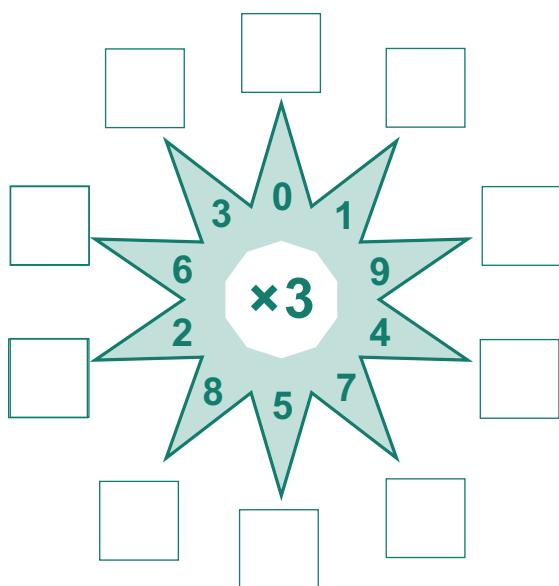


Match.

- | | |
|-------------------|-------------------------------|
| 13. numerator • | • top number in a fraction |
| 14. denominator • | • bottom number in a fraction |

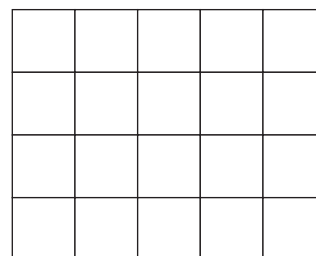
Write the products.

15.



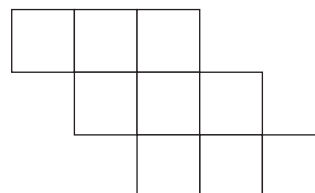
Find the area.

16.



_____ squares

17.



_____ squares

Show the place value for each number.

18. 4,697

19. 738,205

hundred thousands	ten thousands	thousands	hundreds	tens	ones

△ Read the numbers above to someone.

Fact Focus

20. $\begin{array}{r} 3 \\ \times 4 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ \times 0 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ \times 10 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ \times 7 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ \times 3 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ \times 5 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ \times 2 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ \times 8 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ \times 6 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ \times 9 \\ \hline \end{array}$

21. $\begin{array}{r} 2 \\ \times 6 \\ \hline \end{array}$ $\begin{array}{r} 5 \\ \times 7 \\ \hline \end{array}$ $\begin{array}{r} 10 \\ \times 2 \\ \hline \end{array}$ $\begin{array}{r} 2 \\ \times 8 \\ \hline \end{array}$ $\begin{array}{r} 10 \\ \times 6 \\ \hline \end{array}$ $\begin{array}{r} 5 \\ \times 10 \\ \hline \end{array}$ $\begin{array}{r} 5 \\ \times 5 \\ \hline \end{array}$ $\begin{array}{r} 10 \\ \times 3 \\ \hline \end{array}$ $\begin{array}{r} 5 \\ \times 6 \\ \hline \end{array}$ $\begin{array}{r} 5 \\ \times 9 \\ \hline \end{array}$



- ☐ Count by 3's to 36.
- ☐ Practice your G and ×5 flash cards for 5 minutes.
- ☐ Do Speed Drill 13 on page 67.
- ☐ Record your score in the graph on page 60.

Count by Six

Counting by 6 is saying or writing every sixth number. It will help you learn to multiply by six.

When you count by 6, the numbers in the ones place will always be even numbers.

Fill in the missing numbers on this counting chart. The numbers you fill in are counting by 6.

△ **Count aloud by 6's to 60.**

A large-winged butterfly beats its wings 4 times per second. A housefly's wings beat 200 times per second. And the tiny midge fly beats its wings 1,000 times per second.

1.	1	2	3	4	5	
	7	8	9	10	11	
	13	14	15	16	17	
	19	20	21	22	23	
	25	26	27	28	29	
	31	32	33	34	35	
	37	38	39	40	41	
	43	44	45	46	47	
	49	50	51	52	53	
	55	56	57	58	59	

We Remember

Find the sums or differences.

$$\begin{array}{r} 2. \quad 763 \\ - 589 \\ \hline \end{array}$$

$$\begin{array}{r} 575 \\ + 655 \\ \hline \end{array}$$

$$\begin{array}{r} 643 \\ + 51 \\ \hline \end{array}$$

$$\begin{array}{r} 872 \\ - 155 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ 9 \\ 7 \\ + 2 \\ \hline \end{array}$$



3. God has given the beautiful green luna moth 168 hours to live. Mother luna moth has another 59 hours to finish laying her eggs. How old is she now?

Solution

+ joining

− taking away
finding more or less
finding the missing part



Set up the problems and solve.

4. $178 - 96$

Set up the problem

5. $426 + 571$

Set up the problem

Use your reference chart.

6. Write the multiples of 8.

_____	_____	_____
_____	_____	_____
_____	_____	_____

Circle the best answer.

7. How long would it take you to clap your hands one time?

1 second **1 minute**

8. How long would it take you to write 6 words?

1 second **1 minute**

Lesson 13

Write the multiples of 9.

9. _____

Underline the item you would measure with centimeters (cm).

10. the width of a small calculator
the length of a door
the height of the ceiling

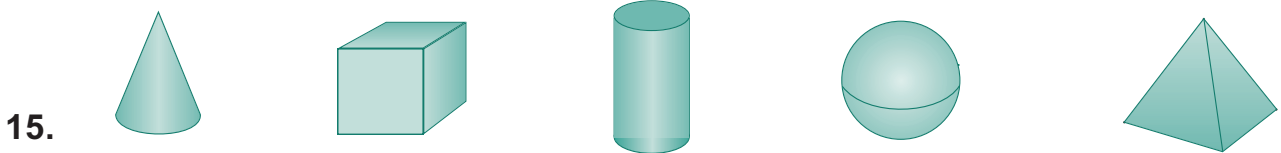
Underline the item you would measure with yards (yd).

11. the height of a mug
the width of your classroom
your shoe

Use your ruler to draw a ray. Start at point J.
Go through point K.

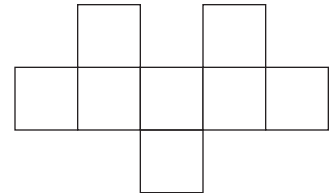
14. J K

Circle the sphere. Put a box around the cube. Put an X on the pyramid.
Put a dot under the cone. Put a smiley face under the cylinder.

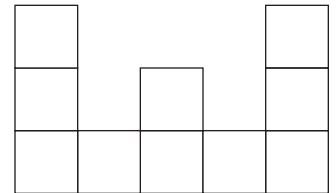


Find the area.

12. _____ squares



13. _____ squares



Write number sentences. Solve.

16. The difference between twelve and eight

17. Fifty and forty put together

Fill in the blanks.

18. 1 meter = _____ centimeters
19. 1 gallon = _____ quarts
20. 1 pint = _____ cups
21. 1 hour = _____ minutes

Answer each side. Then write $<$, $>$, or $=$.

22. $7 + 0$? 7×0 $8 + 8$? 2×8 $10 + 1$? 10×1

Match.

- | | |
|-------------------|--|
| 23. denominator • | • the number of shaded parts |
| 24. numerator • | • the number of equal parts all together |

— Mental Math . . . ? —

25. $96 - 1 =$ _____	$17 - 3 =$ _____	$29 - 4 =$ _____
26. $58 - 8 =$ _____	$11 + 4 =$ _____	$15 + 4 =$ _____
27. $80 - 30 =$ _____	$40 + 50 =$ _____	$50 - 30 =$ _____

— Fact Focus —

28. $\begin{array}{r} 3 \\ \times 6 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ \times 3 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ \times 1 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ \times 9 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ \times 5 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ \times 7 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ \times 2 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ \times 10 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ \times 4 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ \times 8 \\ \hline \end{array}$

29. $\begin{array}{r} 5 \\ \times 2 \\ \hline \end{array}$ $\begin{array}{r} 10 \\ \times 8 \\ \hline \end{array}$ $\begin{array}{r} 2 \\ \times 2 \\ \hline \end{array}$ $\begin{array}{r} 5 \\ \times 4 \\ \hline \end{array}$ $\begin{array}{r} 1 \\ \times 2 \\ \hline \end{array}$ $\begin{array}{r} 2 \\ \times 10 \\ \hline \end{array}$ $\begin{array}{r} 10 \\ \times 4 \\ \hline \end{array}$ $\begin{array}{r} 0 \\ \times 8 \\ \hline \end{array}$ $\begin{array}{r} 2 \\ \times 7 \\ \hline \end{array}$ $\begin{array}{r} 5 \\ \times 3 \\ \hline \end{array}$