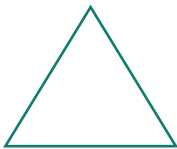




Classifying Triangles by Sides

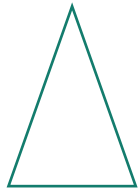
We can name different kinds of triangles according to the lengths of their sides.



equilateral

(ē kwə lə tē rəl)

3 sides of equal length



isosceles

(ī sās' lēz')

2 sides of equal length



scalene

(skā' lēn')

3 sides of different lengths

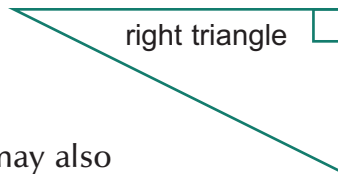
Right Triangles

A **right triangle** has one right angle.

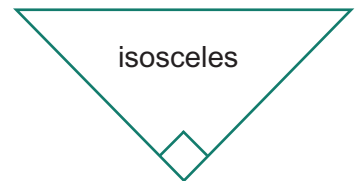
Isosceles and scalene triangles may also be right triangles.



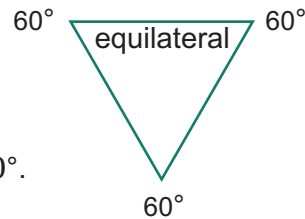
scalene



right triangle



isosceles

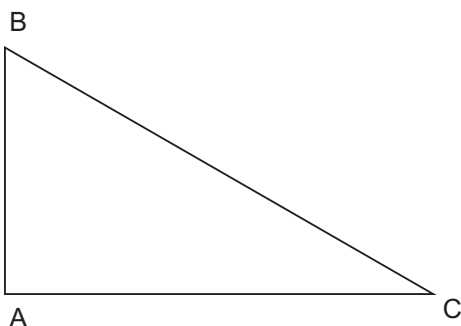


equilateral

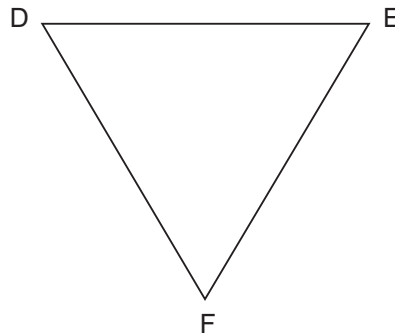
An equilateral triangle cannot be a right triangle because each of its angles measures 60°.

Label the triangles *equilateral*, *isosceles*, or *scalene*.

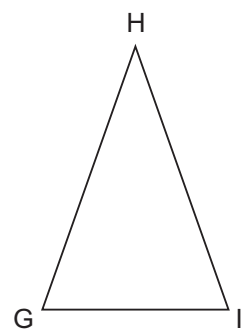
1. a. $\triangle ABC$ _____



b. $\triangle DEF$ _____



c. $\triangle GHI$ _____





We Remember

Divide to compare.

2. Robert went with his father to the hardware store to buy some nails. A sign said that 3 lb of nails cost \$2.91. They found a 5-lb box for \$4.75. Which was less expensive per pound?

3 lb costs _____ per lb.

5 lb costs _____ per lb.

_____ is less expensive per pound than _____.

Write the elements of each set. Then write the union of sets.

3. \in of Set R = {_____}

4. \in of Set E = {_____}

5. $R \cup E = \{ \text{_____} \}$

Set R = Odd numbers
between 2 and 10

Set E = Even numbers
between 1 and 9

Label each number P for *prime* or C for *composite*.

6. a. 67 _____ b. 9 _____ c. 57 _____ d. 89 _____ e. 22 _____

Use short division to solve.

7. a. $7 \overline{)9,159}$

b. $5 \overline{)3,547}$

c. $8 \overline{)9,263}$

?... Mental Math

8. a. $41 \times 5 = \underline{\hspace{2cm}}$

b. $56 \times 4 = \underline{\hspace{2cm}}$

c. $87 \times 5 = \underline{\hspace{2cm}}$

9. a. $\frac{2}{3}$ of 36 is _____.

b. $\frac{3}{5}$ of 15 is _____.

c. $\frac{1}{4}$ of 48 is _____.

Convert the metric units.

kilo	hecto	deca		deci	centi	milli
------	-------	------	--	------	-------	-------

10. a. 3,672 mg = _____ dg b. 638 cm = _____ m c. 22 hL = _____ dKL

Lesson 2

\div \times Skill Builders

Write the remainder
as a fraction.

11. a.
$$\begin{array}{r} 0.52 \\ \times 2.7 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 48.7 \\ \times 136 \\ \hline \end{array}$$

c. $28 \overline{)741}$

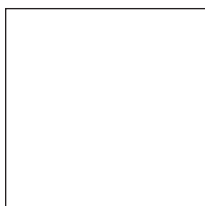
d.
$$\begin{array}{r} 7 \\ -3\overline{)24} \\ \hline \end{array}$$

12. a. $1\frac{9}{16} \times 2\frac{2}{3} = \underline{\hspace{2cm}}$

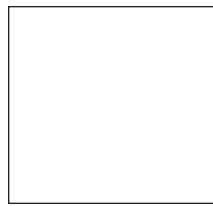
b. $1\frac{1}{2} \times 3\frac{1}{2} = \underline{\hspace{2cm}}$

Copy and solve.

13. a. $23 - 16.68 = \underline{\hspace{2cm}}$



b. $87.2 + 0.078 = \underline{\hspace{2cm}}$



How much time has passed?

14. 8:38 am to 3:21 pm
 $\underline{\hspace{1cm}}$ hr $\underline{\hspace{1cm}}$ min

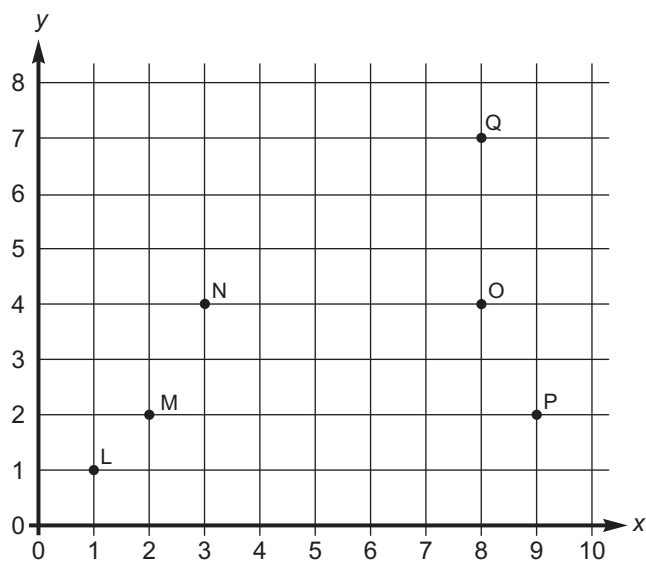
Connect four of the points to show a trapezoid. Write the letters and ordered pairs that form the trapezoid.

15. $\underline{\hspace{2cm}}$ $\underline{\hspace{2cm}}$
 $\underline{\hspace{2cm}}$ $\underline{\hspace{2cm}}$

Plot these points on the grid.

16. a. A (5, 6) b. B (10, 4)

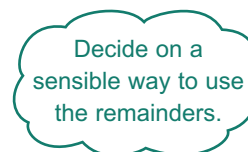
17. a. C (1, 8) b. D (5, 0)





18. The New Tribes Mission has established 230 churches in 47 tribal areas of Papua New Guinea. About how many churches is this per tribal area?

Answer: _____



19. Thirteen tribes in the Islands Region had heard the Gospel. About $\frac{1}{3}$ of these had a complete translation of the New Testament in their own language. About how many tribes had the New Testament in their own language?

Answer: _____

Solve and check.

20. a. $n + 5 = 12$




b.

c. $7 = n - 20$



d.

Complete the calculator keychart.

21. Karen is shopping for supplies to take to Papua New Guinea. She spent \$32.98 at one  store, \$57.42 at another store, and \$128.04 at the third store. How much did she spend altogether?

_____ _____ _____ \$ _____

Complete the equations by filling in the boxes. Then match with the correct property.

- | | | |
|---|----------|---|
| 22. a. $a + \boxed{} = b + a$ | b. _____ | v. Commutative property of addition |
| 23. a. $\boxed{} \times 4 = 0$ | b. _____ | w. Commutative property of multiplication |
| 24. a. $23 \times \boxed{} = 23$ | b. _____ | x. Zero property of multiplication |
| 25. a. $5 \times 2 = 2 \times \boxed{}$ | b. _____ | y. Identity property of addition |
| 26. a. $\boxed{} + 0 = y$ | b. _____ | z. Identity property of multiplication |

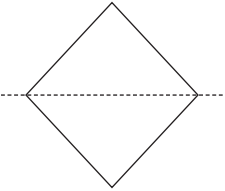
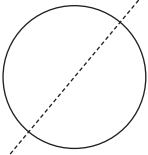
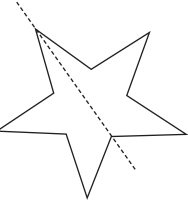
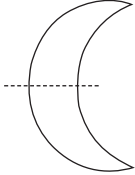
Match each triangle to its description.

- | | |
|-----------------------|---|
| 27. _____ scalene | a. All three sides are the same length. |
| 28. _____ equilateral | b. Only two sides are the same length. |
| 29. _____ isosceles | c. All three sides are different lengths. |

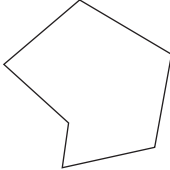
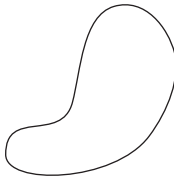
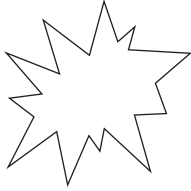
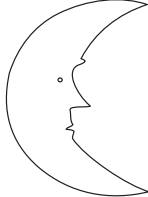
Biological Symmetry

You remember that an object has symmetry when the two halves match exactly. Not all objects have symmetry. We say they are *asymmetrical*.

Mathematically Symmetrical

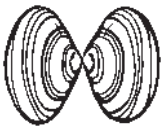






Mathematically Asymmetrical



Objects in nature like trees and faces may not be *exactly* the same on both sides but they can be very, very similar. We say these objects are **biologically symmetrical**.

Biologically Symmetrical

bivalve shell



palm frond

face



butterfly

Biologically Asymmetrical

univalve shell

rock

hand

cocker spaniel

Lesson 12

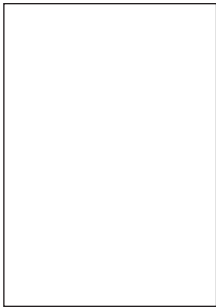
Do these natural objects have biological symmetry? Write *yes* or *no*.

1. a. your foot _____ b. a maple leaf _____
2. a. your body _____ b. a pea pod _____
3. a. an apple _____ b. your ear _____

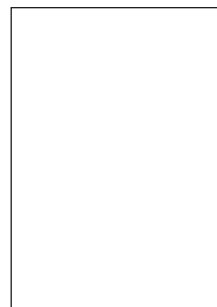


Copy and solve. Pay attention to the zeros. Simplify if possible.

4. a. $0.69 \times 7.01 =$ _____

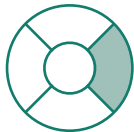


b. $0.723 \times 600 =$ _____



Continue the pattern.

5.



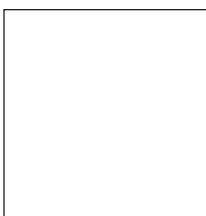
Estimate the width of a window in the room in feet. Then measure it to the nearest foot.

△ 6. a. estimated width _____ ft

b. measured width _____ ft

Copy and solve.

7. a. $34.29 - 16.7 =$ _____



b. $1.89 + 2.01 + 0.023 + 3.6 =$ _____



Complete the equations by filling in the boxes. Then match with the correct property.

8. a. $7 + 6 = 6 + \boxed{}$ b. $\underline{\hspace{1cm}}$

v. Commutative property of addition

9. a. $\boxed{} \times 1 = 8$ b. $\underline{\hspace{1cm}}$

w. Commutative property of multiplication

10. a. $8 \times 7 = \boxed{} \times 8$ b. $\underline{\hspace{1cm}}$

x. Zero property of multiplication

11. a. $\boxed{} + 0 = 6$ b. $\underline{\hspace{1cm}}$

y. Identity property of addition

12. a. $0 \times 33 = \boxed{}$ b. $\underline{\hspace{1cm}}$

z. Identity property of multiplication

Solve.

13. a. $4 \times \frac{2}{3} = \underline{\hspace{2cm}}$

b. $2\frac{6}{7} \times \frac{4}{5} = \underline{\hspace{2cm}}$

Write the letter of each quadrilateral beside as many classifications as possible.

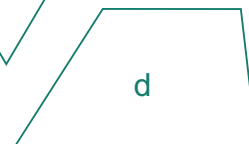
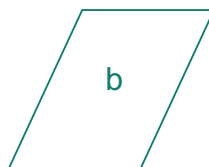
14. rhombus $\underline{\hspace{1cm}}$ $\underline{\hspace{1cm}}$

15. rectangle $\underline{\hspace{1cm}}$ $\underline{\hspace{1cm}}$

16. square $\underline{\hspace{1cm}}$

17. trapezoid $\underline{\hspace{1cm}}$

18. parallelogram $\underline{\hspace{1cm}}$ $\underline{\hspace{1cm}}$ $\underline{\hspace{1cm}}$ $\underline{\hspace{1cm}}$



19. Two-fifths of the 250 people in Ais can read and write.
How many people in this village can read and write?

Answer: $\underline{\hspace{2cm}}$

Divide to compare.

20. A 16-oz jar of pizza sauce costs \$2.56.

A 9-oz jar of pizza sauce costs \$1.62.

16 oz costs $\underline{\hspace{1cm}}$ per oz.

9 oz costs $\underline{\hspace{1cm}}$ per oz.

$\underline{\hspace{1cm}}$ is less expensive per oz than $\underline{\hspace{1cm}}$.

Women in Papua New Guinea traditionally do most of the heavy physical work. But now Christian men are seeing the importance of being head of the home and respecting their wives as more than just a piece of property. They are helping their wives with heavy baskets of food from the gardens, and becoming more involved in raising their children.

Lesson 12

— \div \times Skill Builders —

Annex zeros
to complete.

Annex zeros
to complete.

21. a. $31 \overline{)32.86}$

b. $48 \overline{)390}$

c. $5 \overline{)1.71}$

Round to the nearest whole number to estimate. Then find the exact answer.

22. a.
$$\begin{array}{r} 76.23 \\ \times 8.9 \\ \hline \end{array} \xrightarrow{\text{estimate}}$$

b.
$$\begin{array}{r} 98.7 \\ \times 6.8 \\ \hline \end{array} \xrightarrow{\text{estimate}}$$

Convert the metric units.

kilo	hecto	deca		deci	centi	milli
------	-------	------	--	------	-------	-------

23. a. $9.5 \text{ L} = \underline{\hspace{2cm}} \text{ mL}$

b. $28 \text{ mL} = \underline{\hspace{2cm}} \text{ L}$

c. $1.2 \text{ kL} = \underline{\hspace{2cm}} \text{ L}$

— ?... Mental Math —

24. a. $32 \times 4 = \underline{\hspace{2cm}}$

b. $71 \times 5 = \underline{\hspace{2cm}}$

c. $43 \times 6 = \underline{\hspace{2cm}}$

25. a. $\frac{2}{3}$ of 9 is $\underline{\hspace{2cm}}$.

b. $\frac{2}{7}$ of 28 is $\underline{\hspace{2cm}}$.

c. $\frac{1}{4}$ of 44 is $\underline{\hspace{2cm}}$.

26.
$$\begin{array}{c} \frac{1}{12} \text{ of } 96 \\ \times 100 \\ \div 10 \\ + 14 \\ \div 10 \end{array} = \underline{\hspace{2cm}}$$

Solve and check.

27. a. $6 = n - 24$ b. ☒

c. $n + 6 = 17$ d. ☒

How much time has passed?

28. 6:30 p.m. to 8:45 p.m.
 _____ hr _____ min

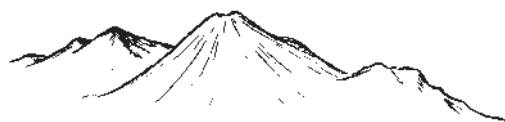
Do these natural objects have biological symmetry? Write *yes* or *no*.

29. a.



hibiscus flower

b.



volcanic mountain



Precision in Measurement

This simple measuring tape marks only inches. It does not measure very **precisely**.



This tape is **more precise**. It shows half-inches as well as inches.

