



Dividing By Multiples of 100 With Remainders

When your divisor has three digits, you must be especially careful to begin writing your quotient in the correct place above the dividend.

Put the 2 over the 2 in 842, because we are dividing into 842.

$$\begin{array}{r} 2 \text{ R } 42 \\ 400 \overline{)842} \\ \underline{800} \\ 42 \end{array}$$

Put the 3 over the 4 in 16,145, because we are dividing into 1,614.

$$\begin{array}{r} 32 \text{ R } 145 \\ 500 \overline{)16,145} \\ \underline{1500} \downarrow \\ 1,145 \\ \underline{1,000} \\ 145 \end{array}$$

Divide. Write remainders with *R*.

1. a. $400 \overline{)2,752}$

b. $400 \overline{)8,518}$

c. $200 \overline{)482}$

Naming Many Years

Large sets of years have special names.

10 years is called a **decade**.

100 years is called a **century**.

1,000 years is called a **millennium**.

Match the time periods on the left with the person closest to that age on the right.

- | | |
|-----------------------|--|
| 2. _____ 1 century | a. a fifth-grade student |
| 3. _____ 1 decade | b. Methuselah, the oldest man, who lived 969 years |
| 4. _____ 1 millennium | c. the oldest person you know |



We Remember

Match the words and expressions.

- | | |
|--|-----------------|
| 5. _____ four plus one, times nine | a. $7 + 3n$ |
| 6. _____ seven times eight | b. $6 \cdot 3$ |
| 7. _____ seven plus three times a number | c. $(4 + 1)9$ |
| 8. _____ six times three | d. 7×8 |

Johann Kepler (1571 to 1630) discovered the mathematical laws that determine how the planets move. He said that studying mathematics was merely "thinking God's thoughts after Him".

Write the formulas without using multiplication symbols.

9. Area of a rectangle _____
10. Area of a triangle _____
11. Circumference of a circle _____
12. Area of a square _____

Convert to decimals. Round quotients to the nearest hundredth.

13. a. $\frac{5}{16} \approx$ _____
- b. $\frac{6}{7} \approx$ _____
- c. $5\frac{1}{8} \approx$ _____

Lesson 1

— $\frac{+}{-} \times$ Skill Builders —

14. a.
$$\begin{array}{r} 2,472 \\ \times 603 \\ \hline \end{array}$$

Write the repeating decimal with a bar.

b. $15 \overline{)10}$

c.
$$\begin{array}{r} 2\frac{1}{6} \\ + 3\frac{4}{5} \\ \hline \end{array}$$

Annex 0's to finish the division.

15. a. $4\frac{1}{8} \div 1\frac{5}{6} = \underline{\hspace{2cm}}$

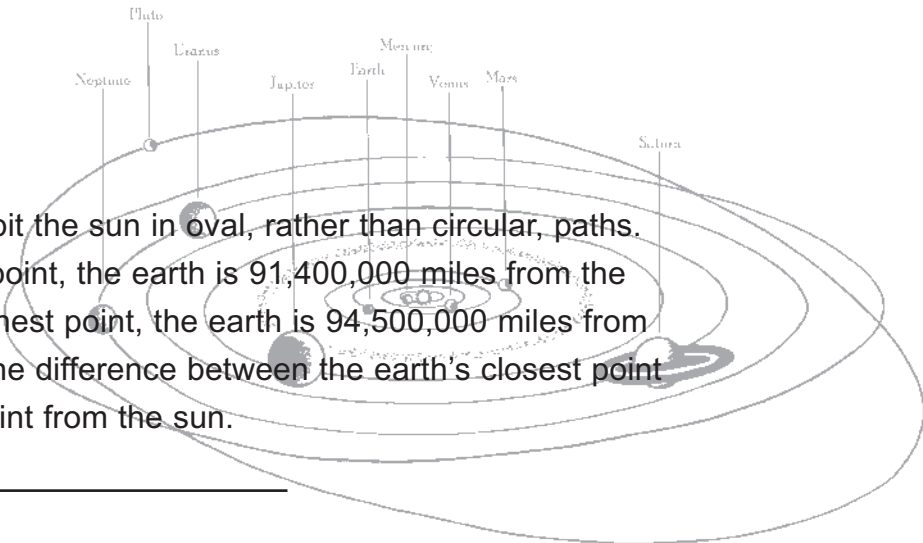
b. $35 \overline{)5.88}$

c.
$$\begin{array}{r} 6,104 \\ -1,191 \\ \hline \end{array}$$



16. The planets orbit the sun in oval, rather than circular, paths.

At the closest point, the earth is 91,400,000 miles from the sun. At the farthest point, the earth is 94,500,000 miles from the sun. Find the difference between the earth's closest point and farthest point from the sun.



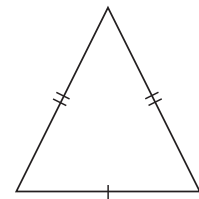
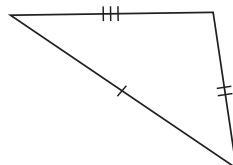
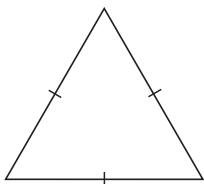
Combine integers.

17. a. $15 + (-4) = \underline{\hspace{2cm}}$

b. $23 + (-23) = \underline{\hspace{2cm}}$

c. $-6 + (-7) = \underline{\hspace{2cm}}$

Classify each triangle as *equilateral*, *isosceles*, or *scalene*.



18. a. _____

b. _____

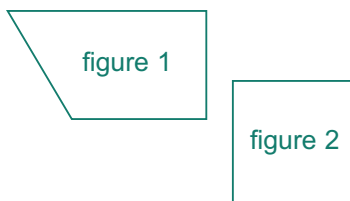
c. _____

Mastery Drill

19. a. 1 cubic centimeter = _____ milliliter b. The fraction we use for π is _____.
20. a. A straight angle measures _____° b. A right angle measures _____°.
21. An obtuse angle measures between _____° and _____°.
22. An acute angle measures between _____° and _____°.
23. The formula we use for the area of a rectangle is _____.

Complete the sentences.

24. A trapezoid has only 1 pair of _____ sides.
25. Figure _____ is a trapezoid.



Draw and label these angles.

- △ 26. a. $\angle WXY$, 90° b. $\angle RST$, 165°

Go back to number 27. Classify each angle as *acute*, *obtuse*, *right*, or *straight*.

27. a. $\angle WXY$ _____ b. $\angle RST$ _____

Divide. Write remainders with *R*.

28. a. $600 \overline{)896}$ b. $500 \overline{)16,459}$ c. $200 \overline{)1,492}$

2

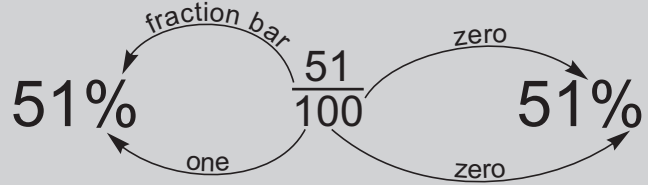


Writing Ratios as Percents

The percent sign (%) reminds us that a percent is a ratio of 100. It is convenient to write a ratio as a percent if it has a denominator of 100.

Out of 100 problems, Jerrel had 97 correct.
97 out of 100 is 97%.

A percent shows how many out of 100.



It may be helpful to think of the slanted line in the percent sign as either a fraction bar or the 1 in the number 100. The two circles in the percent sign could stand for the two zeros of 100.

The word *percent* is a shortened form of the old Latin term *per cento* meaning “out of 100.”

Write the ratios as percents.

1. a. 40 out of 100 _____ b. 72:100 _____ c. $\frac{98}{100}$ _____

The Other Part of a Percent

If we know a percent, we can find the other part of the whole by subtracting from 100.

For example, we know that all the sheep in a field (100% of them) are either white or black. If 75% are white, then 25% are black because $100 - 75 = 25$.

Answer the questions.

- If 30% of the students are girls, what percent are boys? _____
- If 40% of the days were rainy, what percent were not rainy? _____
- If there is a 50% chance of rain, what chance is there of not having rain? _____



We Remember

Divide. Write remainders with *R*.

5. a. $700 \overline{)3,248}$

b. $300 \overline{)742}$

c. $800 \overline{)5,821}$

Mastery Drill

6. a. 1 decade = _____ years

b. 1 centimeter = _____ millimeters

7. a. 1 century = _____ years

b. 1 cup = _____ fluid ounces

8. a. 1 millennium = _____ years

b. 1 fluid ounce = _____ tablespoons

9. The fraction we use for π is _____.

10. a. *Deca* means _____.

b. *Kilo* means _____.

c. *Milli* means _____.

11. The four angles made by two intersecting lines measure a total of _____°.

Write the numbers. Use proportions if necessary.

12. a. 4 years = _____ days

b. 24 dozen cookies = _____ cookies

Solve and check.

13. a. $n + 4 = 16$



b.



c. $10 = n - 14$

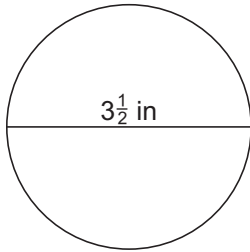
d.

Lesson 2

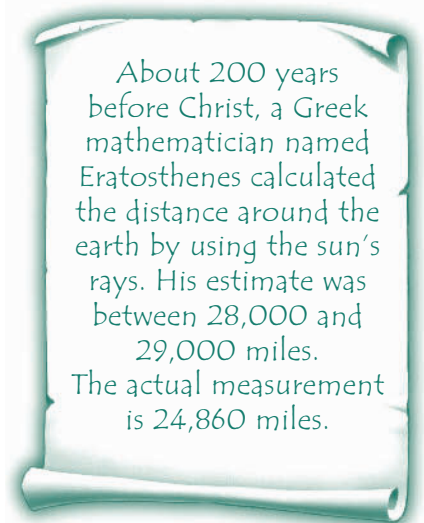
+ **x** Skill Builders

14. a. $\frac{5}{6} \times \frac{3}{4} \times \frac{2}{5} =$ _____ b. $1\frac{1}{3} \times 4\frac{1}{2} \times 2\frac{1}{6} =$ _____ c. $3\frac{6}{7} \div 9 =$ _____

Use the formula to find the circumference. Use $\frac{22}{7}$ for pi.



15. _____



Divide mentally.

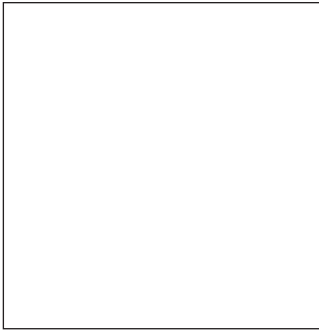
16. a. $400 \overline{)3,600}$ b. $9,000 \overline{)81,000}$ c. $70 \overline{)630}$

17. Randy's family needed to move because his father was asked to teach at a Christian school in another state. The family bought an old run-down property that needed repairs. The wooden floor in the living room, which measured 13 feet by 20 feet, needed to be replaced. At a cost of \$2.50 per square foot, what did it cost to replace the floor?

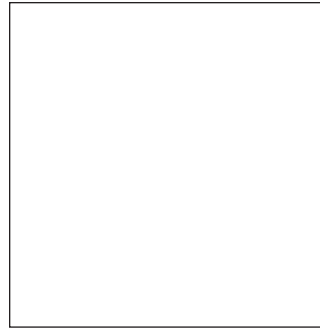
18. A small section of yard in front of the house had been dug up by the former owner's dog. Randy's dad wanted to replace a square of the lawn measuring 14 feet on each side with new sod. Sod cost \$.35 per square foot. What did it cost to repair the damage done by the dog?

Copy and solve.

19. a. $58.8 + 3.97 + 610 + 1.83 =$ _____

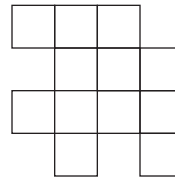
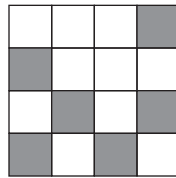
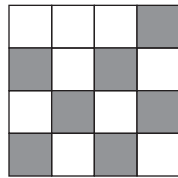
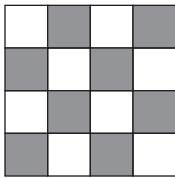


b. $320.4 - 6.571 =$ _____



Shade the fourth square to follow the sequence.

☆ 20.



Use the commutative properties to finish the equations.

21. a. $42 + 78 =$ _____

b. $17 \times \underline{\quad} = 19 \times \underline{\quad}$

Use the associative properties to finish the equations.

22. a. $(a \times b) \times c =$ _____

b. $(4 \times 6) \times 3 =$ _____

Rewrite each decimal as a fraction or mixed number with a denominator of 10, 100, or 1,000. Reduce to simplest form.

23. a. $1.55 = \underline{\quad} = \underline{\quad}$

b. $2.4 = \underline{\quad} = \underline{\quad}$

c. $6.45 = \underline{\quad} = \underline{\quad}$

Substitute 5 for y and 2 for z . Simplify the expressions.

24. a. $z \times y$

b. $50 \div z + y$

c. $y \times 3 - z$

d. $4 \times (y + z)$

Lessons 2, 3

Write the ratios as percents.

25. a. 58 out of 100 _____ b. 18:100 _____ c. $\frac{7}{100}$ _____

Answer the question.

26. If 72% of the fish in a pond are bluegills, what percent are not bluegills? _____



Changing Percents to Fractions

The Studyrite Publishing Company sold 70% of the books it displayed at the homeschool convention. What fraction was this?

To change a percent to a decimal, write it as a two-place decimal. To change it to a fraction, write it with a denominator of 100, and reduce to simplest form.

$$70\% = 0.70 = \frac{70}{100} \quad \frac{70}{100} \text{ reduces to } \frac{7}{10}$$

The Studyrite company sold $\frac{7}{10}$ of the books displayed.

Here is another example.

$$3\% = 0.03 = \frac{3}{100} \quad \frac{3}{100} \text{ cannot be simplified.}$$

Write each percent as a two-place decimal.

1. a. 52% _____ b. 80% _____ c. 60% _____

Write each decimal as a fraction with a denominator of 100.

2. a. 0.35 _____ b. 0.50 _____ c. 0.03 _____