

Solve[™] STAMS[®]

Data Analysis

Geometry and Measurement

Number and Operations



TABLE OF CONTENTS

Practices

Multiplication

| | | |
|----------|-----------------------------|----|
| 1 | Multiplication Properties | 5 |
| 2 | Multiply Mentally | 9 |
| 3 | Multiply by 1-Digit Numbers | 13 |
| 4 | Multiply by 2-Digit Numbers | 17 |

| | | |
|-----------------|---------------|----|
| Review 1 | Practices 1–4 | 21 |
| Review 2 | Practices 1–4 | 23 |

Division

| | | |
|----------|-----------------------------------|----|
| 5 | Relate Division to Multiplication | 25 |
| 6 | Divide Without Regrouping | 29 |
| 7 | Divide with Regrouping | 33 |

Fractions

| | | |
|----------|----------------------|----|
| 8 | Equivalent Fractions | 37 |
|----------|----------------------|----|

| | | |
|-----------------|---------------|----|
| Review 3 | Practices 5–8 | 41 |
| Review 4 | Practices 5–8 | 43 |

| | | |
|----------|--------------------|----|
| 9 | Simplify Fractions | 45 |
|----------|--------------------|----|

Decimals

| | | |
|-----------|------------------------------|----|
| 10 | Decimal Place Value | 49 |
| 11 | Compare and Order Decimals | 53 |
| 12 | Relate Decimals to Fractions | 57 |

| | | |
|-----------------|----------------|----|
| Review 5 | Practices 9–12 | 61 |
| Review 6 | Practices 9–12 | 63 |

Plane Geometry

| | | |
|-----------|--------|----|
| 13 | Angles | 65 |
|-----------|--------|----|

Linear Measurement and Area

| | | |
|-----------|--------------------|----|
| 14 | Understand Area | 69 |
| 15 | Area of Rectangles | 73 |

Graphs

| | | |
|-----------|------------|----|
| 16 | Line Plots | 77 |
|-----------|------------|----|

| | | |
|-----------------|-----------------|----|
| Review 7 | Practices 13–16 | 81 |
| Review 8 | Practices 13–16 | 83 |

Additional Practices

Multiplication

| | | |
|-----------|--------------------------|----|
| 17 | Multiply 3-Digit Numbers | 85 |
|-----------|--------------------------|----|

Division

| | | |
|-----------|------------------|----|
| 18 | 1-Digit Divisors | 89 |
|-----------|------------------|----|

Fractions

| | | |
|-----------|---------------------------------|----|
| 19 | Add and Subtract Like Fractions | 93 |
|-----------|---------------------------------|----|

| | | |
|------------------|---------------------|----|
| Review 9 | Practices 17 and 18 | 97 |
| Review 10 | Practice 19 | 99 |

| | | |
|-----------------|--|-----|
| Glossary | | 101 |
|-----------------|--|-----|

MULTIPLY BY 2-DIGIT NUMBERS

Use multiplication to solve the problem.

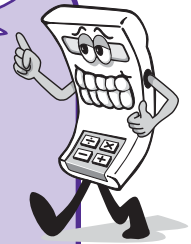
1. What is 24×63 ?

To multiply by a 2-digit number, find partial products for each digit of the **multiplier**. 24 is the multiplier in this problem.

| | | |
|-------------|---|--------------------------------|
| 63 | | |
| <u>× 24</u> | | |
| 1 2 | ← $4 \times 3 = 12$ | Multiply 63 by the ones digit. |
| 2 4 0 | ← $4 \times 60 = 240$ | |
| □ □ | ← $20 \times 3 = \underline{\quad}$ | Multiply 63 by the tens digit. |
| + □ □ □ | ← $20 \times 60 = \underline{\quad}$ | |
| □ □ □ □ | ← Add the partial products to get the product . | |

Solution: $24 \times 63 = \underline{\quad}$

Let's solve this together.



Solve the problem. Multiply. Fill in the blanks.

2.

| | | |
|-------------|--------------------------------------|--|
| 27 | | |
| <u>× 36</u> | | |
| □ □ | ← $6 \times 7 = \underline{\quad}$ | |
| □ □ □ | ← $6 \times 20 = \underline{\quad}$ | |
| □ □ □ | ← $30 \times 7 = \underline{\quad}$ | |
| + □ □ □ | ← $30 \times 20 = \underline{\quad}$ | |
| □ □ □ | ← Add the partial products. | |

Solve each problem. Multiply. Show all the partial products and the product.

3.

| | |
|-------------|--|
| 72 | |
| <u>× 16</u> | |
| □ □ | |
| □ □ □ | |
| □ □ | |
| + □ □ □ | |
| □ □ □ □ | |

4.

| | |
|-------------|--|
| 38 | |
| <u>× 25</u> | |

5.

| | |
|-------------|--|
| 43 | |
| <u>× 29</u> | |

Multiply. Then match each product to a number in the box.
If there is no match, check your work.

1,482 1,612 1,792

6.
$$\begin{array}{r} 62 \\ \times 26 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 78 \\ \times 19 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 56 \\ \times 32 \\ \hline \end{array}$$

Solve each problem. Show your work.

9. In a small concert hall there are 38 rows of seats. Each row has 24 seats. How many seats are in the concert hall?

Solution: _____ seats

10. How many inches are in 26 feet?
(1 foot = 12 inches)

Solution: _____ inches

MULTIPLY BY 2-DIGIT NUMBERS

Let's solve this together.



Use multiplication to solve the problem.

1. What is 24×63 ?

Here is a quicker way to multiply a number by a 2-digit number. Follow the steps.

Step 1

Multiply by ones.

Regroup, if needed.

$$\begin{array}{r} \square \\ 63 \\ \times 24 \\ \hline \square \square \square \end{array} \leftarrow 4 \times 63$$

Step 2

Multiply by tens.

Regroup, if needed.

$$\begin{array}{r} \\ 63 \\ \times 24 \\ \hline 252 \\ \square \square \square \square \end{array} \leftarrow 20 \times 63$$

Step 3

Add the partial products.

$$\begin{array}{r} \\ 63 \\ \times 24 \\ \hline \square \square \square \\ + \square \square \square \square \\ \hline \square \square \square \square \end{array}$$

← partial products
← product

Solution: $24 \times 63 = \underline{\quad}$

Solve each problem. Multiply. Show your work.

2.
$$\begin{array}{r} 42 \\ \times 19 \\ \hline \end{array}$$

← 9×42

← 10×42

3.
$$\begin{array}{r} 64 \\ \times 35 \\ \hline \end{array}$$

4. 38×23

Solve each problem. Choose the best answer.

5.
$$\begin{array}{r} 35 \\ \times 27 \\ \hline \end{array}$$

- (A) 245 (C) 945
(B) 700 (D) 1,045

6. A fourth-grade class of 24 students is going to an amusement park. The price of a student ticket is \$32. What is the total cost of tickets for the whole class?

- (A) \$128 (C) \$778
(B) \$768 (D) \$868

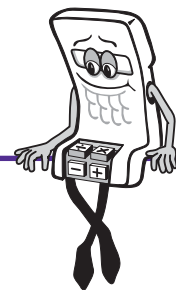
7. 58×58

- (A) 464 (C) 2,964
(B) 754 (D) 3,364

8. How many ounces are there in 45 pounds? (1 pound = 16 ounces)

- (A) 360 (C) 540
(B) 450 (D) 720

Reasoning



Solve each problem. Explain your thinking.

9. Refer to number 6. Two students in the class are unable to attend. What is the total cost of tickets for the class and their teacher if an adult ticket costs \$45?

Solution: _____

Explain how you found the answer.

10. Suri and Josh solved the same problem: 27×45 . Suri found the product 1,215. Josh found the product 1,212. By only looking at the products, and without calculating, who is incorrect? Explain.

REVIEW 1: PRACTICES 1-4

Solve each problem. Choose the best answer.

1. Which makes the sentence true?

$$70 \times \square = 6,300$$

- (A) 9
- (B) 90
- (C) 900
- (D) 9,000

2.
$$\begin{array}{r} 96 \\ \times 7 \\ \hline \end{array}$$

- (A) 622
- (B) 672
- (C) 722
- (D) 742

3. How many inches are there in 15 feet? (1 foot = 12 inches)

- (A) 45
- (B) 150
- (C) 180
- (D) 540

4. Kayla bought 3 bags of buttons. There were 200 buttons in each bag. How many buttons did she buy in all?

- (A) 203
- (B) 600
- (C) 3,200
- (D) 6,000

Mental Math

Match the multiplication problem with the correct answer. Solve as many problems as you can using mental math. Then solve the rest on paper. Show your work.



5. 9×32

6. 90×30

7. 58×39

8. 7×400

9. 8×35

10. 60×43

A 280

B 288

C 2,580

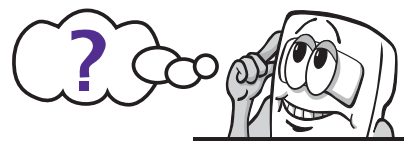
D 2,700

E 2,800

F 2,262

REVIEW 2: PRACTICES 1-4**Mental Math**

Solve each problem using mental math or pencil and paper. Show your work if you do not use mental math.



1. A case of soup has 24 cans. Greg unpacked 7 cases in the store. How many cans of soup did he unpack?

Solution: _____

2. Alisha made 5 cans of soup for a group. The soup in each can has a mass of about 300 grams. About how many grams of soup did she make in all?

Solution: _____

3. How many minutes are there in 20 hours? (1 hour = 60 minutes)

Solution: _____

4. A store ordered 36 boxes of crayons. There are 48 crayons in each box. How many crayons are there in all?

Solution: _____

Solve the problem. Fill in the blanks with numbers or with words from the box.

| | | |
|-------------------------|-----------------------|-----------------------|
| Associative grouping | Commutative number | Distributive order |
|-------------------------|-----------------------|-----------------------|

5. Using the _____ Property of Multiplication, you can change the _____ of the factors and the product is still the same.

Problem: $83 \times 19 = \underline{\quad} \times 83$

Product: $\underline{\quad} = \underline{\quad}$

- Using the _____ Property of Multiplication, you can change the _____ of the factors and the product is still the same.

Problem: $2 \times (5 \times 47) = (\underline{\quad} \times \underline{\quad}) \times 47$

Product: $\underline{\quad} = \underline{\quad}$

Solve each problem. Choose the best answer.

6. Which makes the sentence true?

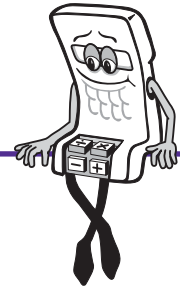
$$35 \times 69 = \blacksquare$$

- (A) 104 (C) 36×59
(B) 3,569 (D) 69×35

7. What is 72×86 ?

- (A) 158 (C) 774
(B) 172 (D) 6,192

Reasoning



Solve each problem. Explain your thinking.

8. Jackson solved the multiplication problem below. Did he find the correct product? Explain why or why not.

$$\begin{array}{r} 46 \\ \times 25 \\ \hline 230 \\ + 92 \\ \hline 322 \end{array}$$

9. Ali did the problem 80×50 and got a product of 4,000. Andy did the same problem and got a product of 400. Who is correct? Explain why.

10. Find the solution using the digits 6, 7, 8, and 9. Use each digit only once.

$$\begin{array}{r} \square \square \\ \times \square \square \\ \hline 6,003 \end{array}$$

Explain how you solved the puzzle.

GLOSSARY**MY EXAMPLES****A a****acute angle**

an angle that measures less than 90°

angle

a figure formed by two rays that share an endpoint, or vertex

area

the number of square units inside a figure

area of a rectangle ($A = l \times w$)

the number of square units inside a rectangle; area = length \times width