

Solve the problems.

1 Which of the following has a product of 25.16?

- A 3.7×680
- B 3.7×68
- C 3.7×6.8
- D 3.7×0.68

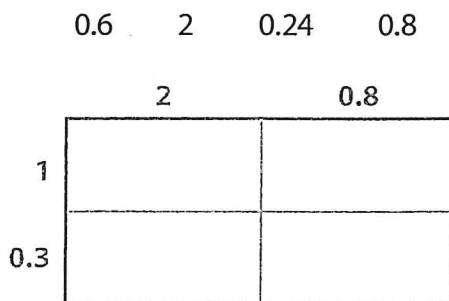
2 Willa downloads 5 songs. Three of the song files are each 2.75 MB. Two song files are each 3.8 MB. How much space does Willa need for the songs she downloads?

- A 5.55 MB
- B 11.55 MB
- C 15.85 MB
- D 27.75 MB

3 Choose ALL the expressions that have the same value as the product of 0.11 and 4.5.

- A 0.495×0.01
- B 0.495×0.001
- C 49.5×0.01
- D 495×0.01
- E 495×0.001

4 The area model below can be used to represent the product of 2.8 and 1.3. Complete the model by writing each of the following numbers in the correct part of the model.



- 5 Tyrone said that 2.35×5 equals 1.175 because there is only one digit before the decimal point in 2.35, so there must be one digit before the decimal point in the product. Use pictures, numbers, or words to explain whether or not Tyrone is correct.

Show your work.

- 6 Each product below is missing a decimal point.

Part A Place the decimal point in each product so that the equation is correct.

$$12.53 \times 5 = 6265$$

$$4.28 \times 3.6 = 15408$$

$$1.3 \times 0.89 = 1157$$

$$7 \times 6.12 = 4284$$

Part B Circle one of the equations. Explain how you decided where to place the decimal point in this equation.



Go back and see what you can check off on the Self Check on page 1.

Name _____

Date _____

Ready® Mathematics

Lesson 8 Quiz

Solve the problems.

1 Which expression has a product of 32.76?

A 4.2×0.78

B 4.2×7.8

C 4.2×78

D 4.2×780

2 A stew recipe calls for 3.75 pounds of meat. Jack wants to make 5 batches of stew. How many pounds of meat does he need?

Show your work.

Answer: _____ pounds of meat

3 Lee needs some school supplies. He will buy 3 notebooks for \$1.29 each, 2 dozen pencils at \$3.45 a dozen and a box of pens for \$14.85 a box. Lee estimates that he will spend about \$25 on these school supplies.

Is Lee's estimation reasonable? How much will he spend exactly?

Fill in the blanks to explain.

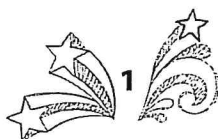
Estimating each price to the nearest dollar, Lee will spend about

\$ _____ on notebooks, \$ _____ on pencils, and

\$ _____ on pens. Lee will spend about \$ _____ in all for these

school supplies. Lee's estimation of \$25 _____ reasonable. He will

spend exactly \$ _____ on these school supplies.



Name _____

Date _____

Lesson 8 Quiz continued

- 4 Mei has 2.5 packages of pretzels. Each full package weighs 5.39 ounces. Mei wants to know how many ounces of pretzels she has.

Part A

Mei draws this area model to find the partial products.

Complete the model by filling in the blanks.

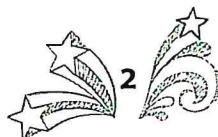
	5	0.3	0.09
2	10	_____	_____
0.5	_____	_____	_____

Part B

How many ounces of pretzels does Mei have in all?

Show your work.

Answer: _____ ounces of pretzels



SKILL 13: Decimal Multiplication by Power of 10**OBJECTIVE:** Multiply decimals by 1000, 100, 10, 1, 0.1, 0.01, & 0.001.

If you are multiplying by 10, 100 or 1000...

then move the decimal to the **RIGHT** the same number as there are zeroes.

If you are multiplying by 0.1, 0.01, or 0.001...

then move the decimal to the **LEFT** the same number as there are zeroes.

EXAMPLE	ANSWER	WHAT HAPPENED TO THE DECIMAL?
2.1×10	21	moved one place right
2.1×100	210	moved two places right
2.1×1000	2100	moved three places right
2.1×0.1	.21	moved one place left
2.1×0.01	.021	moved two places left
2.1×0.001	.0021	moved three places left

EXAMPLE A: Find $6.3 \times 1,000$.**Method 1** Use paper and pencil.

$$\begin{array}{r}
 1,000 \\
 \times 6.3 \\
 \hline
 3,000 \\
 60,000 \\
 \hline
 6,300.0
 \end{array}$$

Method 2 Use mental math.

Move the decimal point to the right the same number of zeros that are in 1,000 or 3 places.

$$6.3 \times 1,000 = 6,300$$

Multiply using the rules for powers of 10.**SKILL 13: PRACTICE SET #1**

- | | | |
|------------------------|--|-----------------------|
| 1) 2.32×10 | 2) 6.8×100 | 3) 5.2×1000 |
| 4) 1.412×100 | 5) $3.7 \times 1,000$ | 6) 4.23×100 |
| 7) 2.6×10 | 8) 9.4×0.1 | 9) 2.4×0.01 |
| 10) 0.4×0.1 | 11) 96.23×0.001 | 12) 137×0.01 |
| 13) 0.697×0.1 | 14) SCHOOL Jaimie purchases 10 pencils at the school bookstore. They cost \$0.30 each. How much did she spend on pencils? | |

SKILL 13: PRACTICE SET #2

- | | | |
|-------------------------|--------------------------|------------------------|
| 1) 82.3×100 | 2) 0.31×10 | 3) 8.3×0.1 |
| 4) 724.3×0.001 | 5) 0.812×1000 | 6) 12.5×0.01 |
| 7) 3.9×0.1 | 8) 0.75×10 | 9) 19.34×0.01 |
| 10) 12×100 | 11) 214.2×0.001 | 12) 4.32×1000 |
| 13) 0.845×100 | 14) 31.4×0.1 | |

SKILL 13: PRACTICE SET #3

- | | | |
|------------------------|----------------------|-----------------------|
| 1) 13.2×0.1 | 2) 16.8×10 | 3) 1.5×100 |
| 4) 19.43×1000 | 5) 4.2×0.01 | 6) 0.5×0.001 |
| 7) 0.92×100 | 8) 0.3×1000 | 9) 7.1×0.01 |

4) 5.01×11.6

5) 9.001×4.2

6) 0.3×0.9

7) 2.6×1.7

8) 1.09×5.4

9) 4.9×0.02

10) 17.2×12.86

11) 5.2×6.13

12) 0.8×0.9

- 13) **MINING** A mine produces 42.5 tons of coal per hour. How much coal will the mine produce in 9.5 hours?

SKILL 10: PRACTICE SET #2

1)
$$\begin{array}{r} 0.8 \\ \times 0.1 \\ \hline \end{array}$$

2)
$$\begin{array}{r} 0.3 \\ \times 0.2 \\ \hline \end{array}$$

3)
$$\begin{array}{r} 0.4 \\ \times 0.6 \\ \hline \end{array}$$

4)
$$\begin{array}{r} 0.48 \\ \times 0.5 \\ \hline \end{array}$$

5)
$$\begin{array}{r} 0.2 \\ \times 0.06 \\ \hline \end{array}$$

6)
$$\begin{array}{r} 0.67 \\ \times 0.9 \\ \hline \end{array}$$

7) 0.93×6.8

8) 3.007×6.1

9)
$$\begin{array}{r} 0.307 \\ \times 0.6 \\ \hline \end{array}$$

10) 16.25×1.3

11) 2.6×5.46

12)
$$\begin{array}{r} 0.447 \\ \times 0.4 \\ \hline \end{array}$$

13)
$$\begin{array}{r} 114.53 \\ \times 6.2 \\ \hline \end{array}$$

14) 

SKILL 10: PRACTICE SET #3

1)
$$\begin{array}{r} 0.6 \\ \times 0.1 \\ \hline \end{array}$$

2)
$$\begin{array}{r} 0.2 \\ \times 0.5 \\ \hline \end{array}$$

3)
$$\begin{array}{r} 0.4 \\ \times 0.8 \\ \hline \end{array}$$

4)
$$\begin{array}{r} 0.33 \\ \times 0.3 \\ \hline \end{array}$$

5)
$$\begin{array}{r} 3.3 \\ \times 3.7 \\ \hline \end{array}$$

6)
$$\begin{array}{r} 54.02 \\ \times 0.4 \\ \hline \end{array}$$

7) 3.5×24.09

8) 0.31×2.9

9)
$$\begin{array}{r} 0.447 \\ \times 0.4 \\ \hline \end{array}$$

Multiply.

SKILL 9: PRACTICE SET #1

1) 8.03×3

2) 2×0.012

3) 6×12.6

4) 0.0008×9

5) 2.32×10

6) 0.8×6

7) 0.7×4

8) 1.9×5

9) 3.4×9

10) 5×0.05

11) 0.0027×15

12) 0.0186×92

Evaluate each expression.

SKILL 9: PRACTICE SET #2

1) 6×3.04

2) 13×2.5

3) 1.006×4

4) 4.007

5) 8.01

6) 61.8

$\times 4$

$\times 5$

$\times 5$

7) 1.58

8) 45.08

9) 3.3

$\times 2$

$\times 3$

$\times 86$

10) 4.3

11) 92.2×9

12) 3.5×17

$\times 84$

SKILL 9: PRACTICE SET #3

1) 2.39×2

2) 87.07×8

3) 5×4.1

4) 3.9

5) 2.2

6) 7.04

7) 2.58

$\times 3$

$\times 3$

$\times 6$

$\times 53$

8) 1.8

9) 76.6

10) 75.1

11) 2.9

$\times 5$

$\times 9$

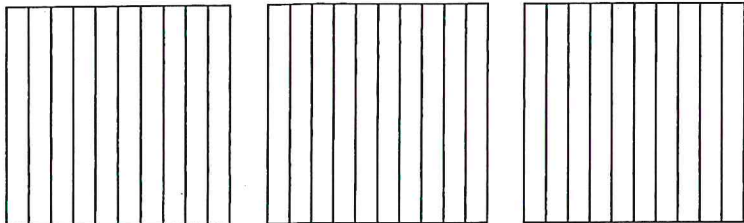
$\times 7$

$\times 65$

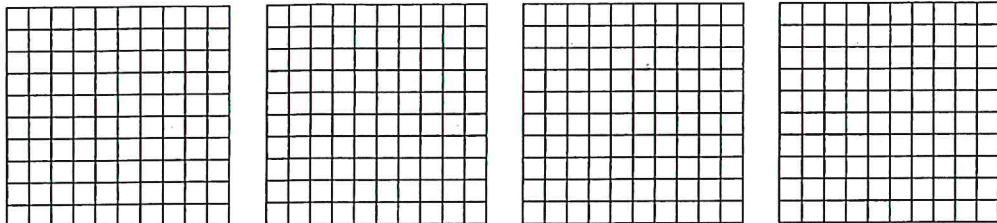


Use the visual model to solve each problem.

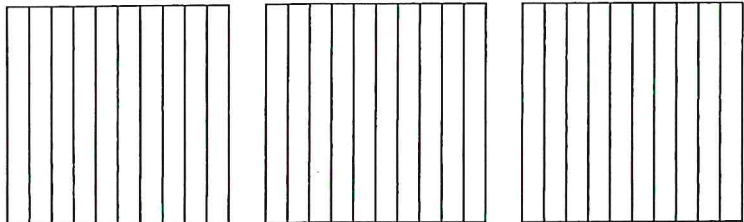
1) $3 \times 0.7 =$



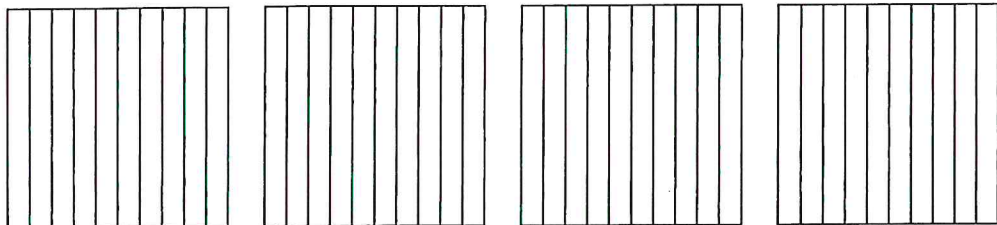
2) $4 \times 0.11 =$



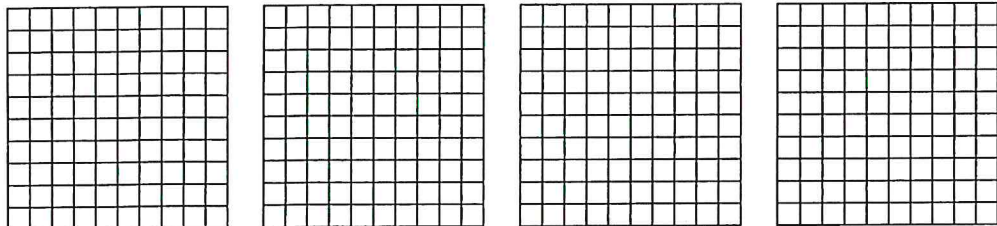
3) $3 \times 0.9 =$



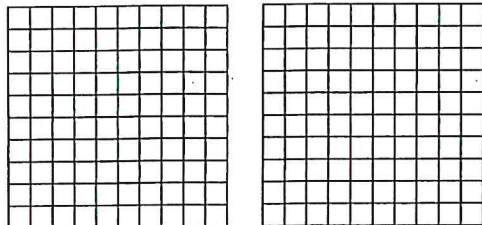
4) $4 \times 0.8 =$



5) $4 \times 0.24 =$



6) $2 \times 0.83 =$



Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

SKILL 11: Decimal Multiplication by Hundredths

OBJECTIVE: Fluently and accurately multiply non-negative decimals.

1. Set-up multiplication problem ignoring all the decimal points.
2. Complete long multiplication (Unit 1; Skill 3).
3. Count the number of decimals digits (those to the right of the decimal point) in both numbers.
4. Move decimals that many places to the left in final answer (you made need to add zeroes to complete this).

EXAMPLE A:

Calculate 3.24×0.67 .

Solution:

$$\begin{array}{r} 3.24 \quad \leftarrow 2 \text{ decimal places} \\ \times 0.67 \quad \leftarrow 2 \text{ decimal places} \\ \hline 2268 \\ 19440 \\ \hline 2.1708 \quad \leftarrow 4 \text{ decimal places in the answer} \end{array}$$

Thus, $3.24 \times 0.67 = 2.1708$

EXAMPLE B:

Calculate 2.731×0.32

Solution:

$$\begin{array}{r} 2.731 \quad \leftarrow 3 \text{ decimal places} \\ \times 0.32 \quad \leftarrow 2 \text{ decimal places} \\ \hline 5462 \\ + 81930 \\ \hline 0.87392 \quad \leftarrow 5 \text{ decimal places in the answer} \end{array}$$

Thus, the final answer is 0.87392

Multiply.

SKILL 11: PRACTICE SET #1

1) 0.56×0.03

2)
$$\begin{array}{r} 0.07 \\ \times 0.01 \\ \hline \end{array}$$

3)
$$\begin{array}{r} 0.49 \\ \times 0.04 \\ \hline \end{array}$$

4) 5.02×1.07

5)
$$\begin{array}{r} 0.41 \\ \times 0.13 \\ \hline \end{array}$$

6)
$$\begin{array}{r} 0.809 \\ \times 0.12 \\ \hline \end{array}$$

7) 2.07×2.008

8) 26.02×2.006

9)
$$\begin{array}{r} 0.84 \\ \times 0.005 \\ \hline \end{array}$$

10) 14.23×8.21

11)
$$\begin{array}{r} 0.04 \\ \times 0.082 \\ \hline \end{array}$$

12)
$$\begin{array}{r} 0.52 \\ \times 0.02 \\ \hline \end{array}$$

- 13) **SHOPPING** Ms. Morgan bought 3.5 pounds of bananas at \$0.51 a pound and 4.5 pounds of pineapple at \$1.19 a pound. How much did she pay for the bananas and pineapple?

SKILL 11: PRACTICE SET #2

1)
$$\begin{array}{r} 0.51 \\ \times 0.75 \\ \hline \end{array}$$

2)
$$\begin{array}{r} 0.46 \\ \times 0.72 \\ \hline \end{array}$$

3)
$$\begin{array}{r} 0.92 \\ \times 0.01 \\ \hline \end{array}$$

4)
$$\begin{array}{r} 0.326 \\ \times 0.001 \\ \hline \end{array}$$

5)
$$\begin{array}{r} 0.077 \\ \times 0.09 \\ \hline \end{array}$$

6)
$$\begin{array}{r} 0.04 \\ \times 0.527 \\ \hline \end{array}$$

7) 2.52×0.15

8)
$$\begin{array}{r} 0.306 \\ \times 0.74 \\ \hline \end{array}$$

9)
$$\begin{array}{r} 0.192 \\ \times 0.06 \\ \hline \end{array}$$

10)
$$\begin{array}{r} 0.89 \\ \times 0.765 \\ \hline \end{array}$$

11)
$$\begin{array}{r} 0.009 \\ \times 0.074 \\ \hline \end{array}$$

12)
$$\begin{array}{r} 0.116 \\ \times 0.387 \\ \hline \end{array}$$

SKILL 11: PRACTICE SET #3

1)
$$\begin{array}{r} 0.38 \\ \times 0.38 \\ \hline \end{array}$$

2)
$$\begin{array}{r} 0.09 \\ \times 0.09 \\ \hline \end{array}$$

3)
$$\begin{array}{r} 0.55 \\ \times 0.04 \\ \hline \end{array}$$

4)
$$\begin{array}{r} 0.772 \\ \times 0.08 \\ \hline \end{array}$$

5)
$$\begin{array}{r} 0.326 \\ \times 0.001 \\ \hline \end{array}$$

6)
$$\begin{array}{r} 0.03 \\ \times 0.54 \\ \hline \end{array}$$

7)
$$\begin{array}{r} 0.041 \\ \times 0.26 \\ \hline \end{array}$$

8)
$$\begin{array}{r} 0.164 \\ \times 0.32 \\ \hline \end{array}$$

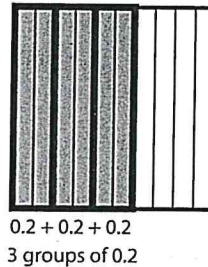
9)
$$\begin{array}{r} 0.108 \\ \times 0.06 \\ \hline \end{array}$$

SKILL 12: Decimal Multiplication and Area Model

OBJECTIVE: Represent multiplication decimals using area models and the number line, and connect each representation to the related equation..

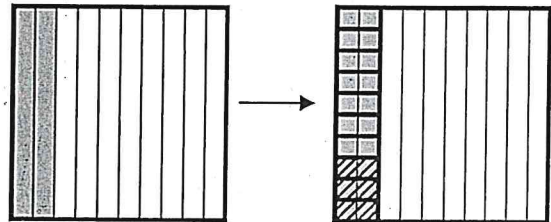
EXAMPLE A: 3×0.2

- 1) 0.2 represents 2 bars out of 10
- 2) 3×0.2 represents 2 bars shaded 3 times
- 3) So, $3 \times 0.2 = 0.6$ because, with 3 groups of 0.2, six-tenths of a whole (0.6) is shaded.



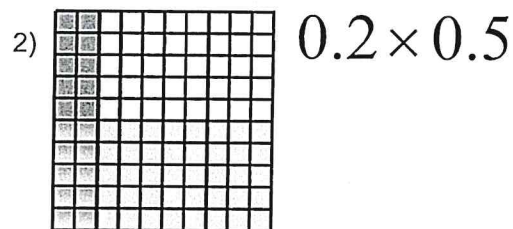
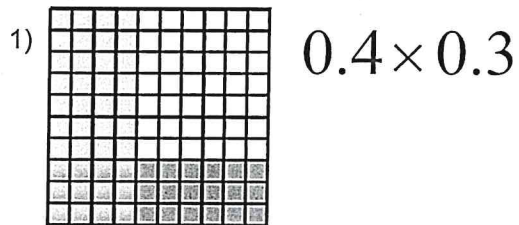
EXAMPLE B: 0.2×0.3

- 1) Represent the number 0.2 (2 bars shaded out of 10)
- 2) Cut 0.2 into tenths (ten equal parts)
- 3) Shade three of the tenths to show 0.3
- 4) Since each small square is 0.01 of the whole and six of the small squares are marked, the diagonally marked section represents 0.06, so $0.3 \times 0.2 = 0.06$.

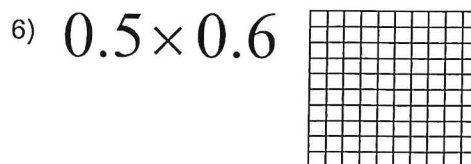
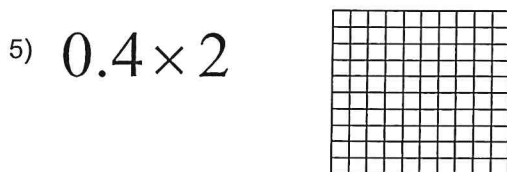
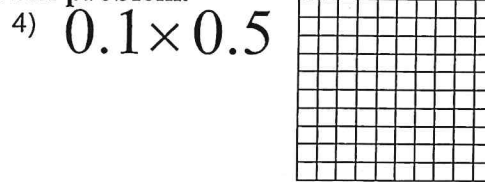
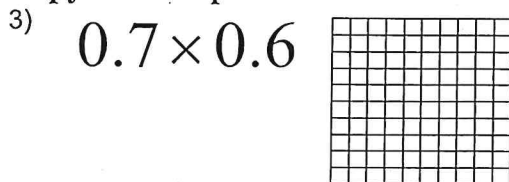


SKILL 12: PRACTICE SET #1

Complete the problems using the area model already provided.



Copy and complete the area model to represent each problem.



MULTIPLY DECIMALS USING ANY WAY YOU HAVE LEARNED.

7) 0.45×3

8) 0.5×0.12

9) 0.8×2

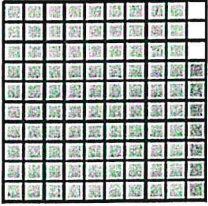
10) 0.2×4

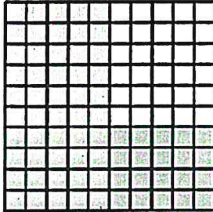
11) 0.6×0.75

12) 0.9×5

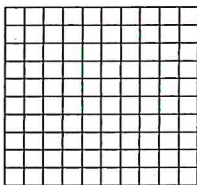
SKILL 12: PRACTICE SET #2

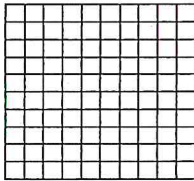
Complete the problems using the area model already provided.

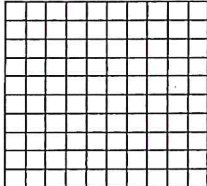
1)  0.9×0.7

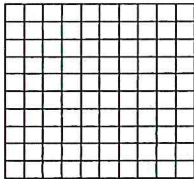
2)  0.4×0.5

Copy and complete the area model to represent each problem.

3) 0.2×0.3 

4) 0.1×0.8 

5) 0.3×3 

6) 0.5×0.3 

MULTIPLY DECIMALS USING ANY WAY YOU HAVE LEARNED.

7) 0.62×3

8) 0.7×0.26

9) 0.9×4

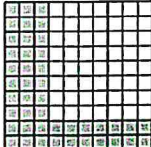
10) 0.1×7

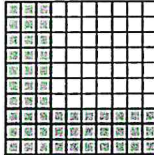
11) 0.5×0.34

12) 0.43×6

SKILL 12: PRACTICE SET #3

Complete the problems using the area model already provided.

1)  0.2×0.3

2)  0.3×0.3

MULTIPLY DECIMALS USING ANY WAY YOU HAVE LEARNED.

3) 0.7×0.4

4) 0.1×0.2

5) 0.2×4

6) 0.5×0.9

7) 0.25×5

8) 0.3×1.4

9) 0.8×0.39

10) 0.4×7