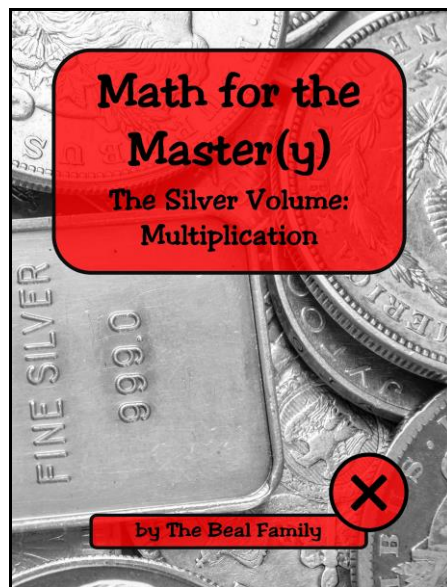


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Math for the Master(y)

The Silver Volume: Multiplication



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Lesson 3

Copy the multiplication facts. Say each fact to yourself as you are copying.

$$\begin{array}{r} 0 \\ \times 1 \\ \hline 0 \end{array}$$

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

$$\begin{array}{r} 2 \\ \times 1 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 3 \\ \times 1 \\ \hline 3 \end{array}$$

$$\begin{array}{r} 4 \\ \times 1 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 5 \\ \times 1 \\ \hline 5 \end{array}$$

$$\begin{array}{r} 6 \\ \times 1 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 7 \\ \times 1 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 8 \\ \times 1 \\ \hline 8 \end{array}$$

$$\begin{array}{r} 9 \\ \times 1 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 10 \\ \times 1 \\ \hline 10 \end{array}$$

$$\begin{array}{r} 11 \\ \times 1 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 12 \\ \times 1 \\ \hline 12 \end{array}$$

Hint: Any number times 1 remains the same.
This is the Identity Property of Multiplication.

Repeat this lesson as many days as necessary. Child should be able to write these multiplication facts correctly without the book and recite the answers when quizzed before advancing to the next lesson.

Lesson 40

These problems are written horizontally (rather than vertically), but the answers to the math facts stay the same.

Examples: $2 \times 4 = \underline{8}$ $11 \times 12 = \underline{132}$

Multiply. Write answers only.

1. $9 \times 8 = \underline{\quad}$ $3 \times 4 = \underline{\quad}$ $7 \times 10 = \underline{\quad}$

2. $4 \times 9 = \underline{\quad}$ $6 \times 5 = \underline{\quad}$ $12 \times 12 = \underline{\quad}$

3. $2 \times 9 = \underline{\quad}$ $5 \times 6 = \underline{\quad}$ $1 \times 7 = \underline{\quad}$

4. $8 \times 11 = \underline{\quad}$ $0 \times 10 = \underline{\quad}$ $2 \times 8 = \underline{\quad}$

5. $0 \times 11 = \underline{\quad}$ $7 \times 6 = \underline{\quad}$ $3 \times 8 = \underline{\quad}$

6. $1 \times 11 = \underline{\quad}$ $0 \times 7 = \underline{\quad}$ $7 \times 4 = \underline{\quad}$

7. $11 \times 12 = \underline{\quad}$ $10 \times 8 = \underline{\quad}$ $8 \times 5 = \underline{\quad}$

8. $2 \times 10 = \underline{\quad}$ $8 \times 6 = \underline{\quad}$ $12 \times 9 = \underline{\quad}$

Repeat this lesson as many days as necessary. Child should be able to write the correct answers before advancing to the next lesson.

Lesson 48

Read each word problem and figure the answer.
Record your answer in number and word.

Example:

Grandfather purchased 2 bags of jelly beans to share with children after church Sunday morning. If each bag contained 68 candies, how many jelly beans did Grandfather have in all?

$\begin{array}{r} 1 \\ 68 \\ \times 2 \\ \hline \end{array}$	step 1: Read the problem carefully.
136 jelly beans	step 2: Find the multiplicand.* (68)
	step 3: Find the multiplier.* (2)
	step 4: Multiply.
	step 5: Record the product with a word telling what it represents. (Question: "How many jelly beans?" Answer: "136 jelly beans")

1. One January day Mother shared with Brother and Sister about some missionary friends who had been serving in Lima, Peru, and were going to be moving to a new city. The children asked if it was cold there, and Mother explained that Lima's average tempera-

ture in January is double their own. Brother checked the thermometer and saw that it was 41 degrees outside. So what was the likely temperature in Lima, Peru, that day?

2. When Sister woke up the next day, it was colder outside. She checked the thermometer, and it showed 23 degrees. Later that day Mother and the children studied Cusco, Peru, where their missionary friends would be moving in the spring. The average temperature of Cusco in April is 3 times the temperature when Sister awoke. What temperature could their missionary friends expect upon arrival in Cusco?

3. Mother came down with a fever, so Father went to town to pick up some medicine for her. As he walked into the pharmacy, Mr. Pharmacist was taking inventory and preparing to place an order for more acetaminophen. If Mr. Pharmacist ordered 4 boxes, each containing 16 bottles of acetaminophen, how many bottles would he receive in all?

4. As they talked about the illness that was spreading through the community, Mr. Pharmacist told Father that he also needed to order more cough syrup. The boxes of cough syrup each held 15 bottles. What

would the total number of bottles be if he ordered 5 boxes?

5. The ladies in Grandmother's sewing circle were making lap quilts for residents of local nursing homes. Grandmother made quilts that had 9 rows, each with 13 squares. How many squares of cloth did Grandmother need to cut for each lap quilt?

6. Over a two-year span the 17 ladies in Grandmother's sewing circle each made 6 quilts for the nursing home residents. What number of quilts did the sewing circle donate in all?

* Generally, use the larger number as the multiplicand and the smaller number as the multiplier, but remember that because of the Commutative Property (see hint in Lesson 6), you could switch the order of the two and the answer would be the same.

Repeat this lesson as many days as necessary. Child should be able to figure the correct answers before advancing to the next lesson. See Lessons 44, 45, 46, and Appendix if additional help is required.

Lesson 53

Copy and multiply.

1.
$$\begin{array}{r} 2,912 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 1,754 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 8,626 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 6,955 \\ \times 4 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 7,462 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 5,684 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 3,719 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 7,330 \\ \times 9 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 8,345 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 5,256 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 1,196 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 7,722 \\ \times 8 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 8,316 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 4,927 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 7,742 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 8,085 \\ \times 3 \\ \hline \end{array}$$

Repeat this lesson as many days as necessary. Child should be able to solve the problems correctly before advancing to the next lesson.

Lesson 79

To multiply any number by 100, add *two* zeroes to the end of the number. When necessary, place a comma or move the existing comma *two* places to the right.*

Examples: $28 \times 100 = \underline{2,800}$
 $714 \times 100 = \underline{71,400}$
 $3,596 \times 100 = \underline{359,600}$

Multiply mentally. Write answers only.

- | | |
|-------------------------------|----------------------------|
| 1. $578 \times 100 =$ _____ | $2,963 \times 100 =$ _____ |
| 2. $68 \times 100 =$ _____ | $155 \times 100 =$ _____ |
| 3. $849 \times 100 =$ _____ | $6,135 \times 100 =$ _____ |
| 4. $35 \times 100 =$ _____ | $89 \times 100 =$ _____ |
| 5. $5,266 \times 100 =$ _____ | $518 \times 100 =$ _____ |
| 6. $94 \times 100 =$ _____ | $4,488 \times 100 =$ _____ |
| 7. $7,100 \times 100 =$ _____ | $231 \times 100 =$ _____ |
| 8. $443 \times 100 =$ _____ | $73 \times 100 =$ _____ |
| 9. $9,101 \times 100 =$ _____ | $177 \times 100 =$ _____ |
| 10. $64 \times 100 =$ _____ | $3,859 \times 100 =$ _____ |

** Numbers larger than six digits will require two or more commas. Always place a comma every three digits from the right. Repeat this lesson as many days as necessary. Child should be able to write the correct answers before advancing to the next lesson.*

Lesson 83

Sometimes the multiplicand will have one or more zeroes. Swap the factors (multiplicand and multiplier), then use the shortcut you learned in the last lesson. This works because two numbers multiplied together will give the same answer, regardless of which is the multiplier and which is the multiplicand.

Example:

$$\begin{array}{r} \textcircled{900} \\ \times 765 \\ \hline \end{array} \quad \begin{array}{r} 765 \\ \times 9 \\ \hline 688,500 \end{array}$$

step 1: Swap the factors to multiply 765 times 9. (which is 6,885)

step 2: Add the zeroes to the end of the product and place the comma.

Copy and multiply.

1. $\begin{array}{r} 90 \\ \times 45 \\ \hline \end{array}$ $\begin{array}{r} 700 \\ \times 843 \\ \hline \end{array}$ $\begin{array}{r} 2,800 \\ \times 5,467 \\ \hline \end{array}$ $\begin{array}{r} 400 \\ \times 333 \\ \hline \end{array}$

2. $\begin{array}{r} 390 \\ \times 582 \\ \hline \end{array}$ $\begin{array}{r} 6,000 \\ \times 8,105 \\ \hline \end{array}$ $\begin{array}{r} 80 \\ \times 99 \\ \hline \end{array}$ $\begin{array}{r} 5,000 \\ \times 1,776 \\ \hline \end{array}$

Note: Swapping factors is also advantageous when a lower number is listed first. Example: 28×473 can become 473×28 .

Repeat this lesson as many days as necessary. Child should be able to solve the problems correctly before advancing to the next lesson.

Key pages for **Math for the Master(y)** are full-size (like student lessons) and include answers in bold.

Lesson 40

These problems are written horizontally (rather than vertically), but the answers to the math facts stay the same.

Examples: $2 \times 4 = \underline{\mathbf{8}}$ $11 \times 12 = \underline{\mathbf{132}}$

Multiply. Write answers only.

1. $9 \times 8 = \underline{\mathbf{72}}$ $3 \times 4 = \underline{\mathbf{12}}$ $7 \times 10 = \underline{\mathbf{70}}$

2. $4 \times 9 = \underline{\mathbf{36}}$ $6 \times 5 = \underline{\mathbf{30}}$ $12 \times 12 = \underline{\mathbf{144}}$

3. $2 \times 9 = \underline{\mathbf{18}}$ $5 \times 6 = \underline{\mathbf{30}}$ $1 \times 7 = \underline{\mathbf{7}}$

4. $8 \times 11 = \underline{\mathbf{88}}$ $0 \times 10 = \underline{\mathbf{0}}$ $2 \times 8 = \underline{\mathbf{16}}$

5. $0 \times 11 = \underline{\mathbf{0}}$ $7 \times 6 = \underline{\mathbf{42}}$ $3 \times 8 = \underline{\mathbf{24}}$

6. $1 \times 11 = \underline{\mathbf{11}}$ $0 \times 7 = \underline{\mathbf{0}}$ $7 \times 4 = \underline{\mathbf{28}}$

7. $11 \times 12 = \underline{\mathbf{132}}$ $10 \times 8 = \underline{\mathbf{80}}$ $8 \times 5 = \underline{\mathbf{40}}$

8. $2 \times 10 = \underline{\mathbf{20}}$ $8 \times 6 = \underline{\mathbf{48}}$ $12 \times 9 = \underline{\mathbf{108}}$

Repeat this lesson as many days as necessary. Child should be able to write the correct answers before advancing to the next lesson.