

# Multiplication Practice Sheets: Grade 4



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## **Multiplication Practice Sheets – Grade 4**

Week after week...month after month. Multiplication just never seems to end for fourth graders! Looking for a way out? Don't bother – you're trapped. The only thing you can do is keep plowing ahead. If you keep practicing and building a strong foundation now, you'll be ready to tackle division and more complicated concepts later on.

Use these multiplication worksheets to reinforce what you're learning in class, to prep for standardized tests, or to keep your math mind in gear during the summer. But before you jump in, take a look at the "Math Hints and Reminders" sheets. You may want to refer to these pages and their tips as you go through the worksheets.

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## Math Hints and Reminders: Multiplication Concepts and Facts

### Reviewing the Meaning of Multiplication

When you're putting together equal numbers, you can use addition *or* multiplication: Adding four 6s ( $6 + 6 + 6 + 6 = 24$ ) is the same as multiplying  $4 \times 6 = 24$ , except multiplication is quicker! Here's a little multiplication vocab to get you started:

Factors	Numbers that are multiplied together to get a product
Product	The number you get after multiplying factors – in other words, the answer!
Place value	The value given to a digit's place in a number: $423 = 4$ hundreds, 2 tens, 3 ones
Multiple	The product of a given number and any other number: $6 \times 2 = 12$ $6 \times 3 = 18 \rightarrow$ multiples of 6

There's no trick to memorizing your multiplication facts. You just have to do it. Flash cards can help. Once you have the facts down, multiplying 2-digit and 3-digit numbers is just a matter of adding a few steps onto what you already know.

### Exploring Patterns in Multiplying by 0, 1, 2, 5, and 9

Identifying patterns can help you learn your multiplication facts, and it will help you with division later on. Here are a few patterns and properties that you should memorize, if you haven't already:

Order Property	Two numbers can be multiplied in any order: $3 \times 4 = 4 \times 3$
Zero Property	The product of 0 and any number is 0: $0 \times 3 = 0$
One Property	The product of 1 and any number (except 0) is that number: $1 \times 3 = 3$
Multiples of 2	End in 0, 2, 4, 6, or 8
Multiples of 5	End in 0 or 5
Multiples of 9	The sum of the digits is nine. And the digit in the tens place of the product is one less than the other factor.

### Multiplying with 3 and 4 as Factors

You can use what you know about multiplying by 0, 1, and 2 – and a little bit of addition – to help you multiply by 3 or 4.

You can use a 2s fact plus a 1s fact to find any multiple of 3. To find $3 \times 7$ , multiply: $2 \times 7 = 14$ $1 \times 7 = 7$ Then add: $14 + 7 = 21$	You can double a 2s fact to find any multiple of 4. To find $4 \times 6$ , multiply: $2 \times 6 = 12$ $2 \times 6 = 12$ Then add: $12 + 12 = 24$ .
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### Multiplying with 6, 7, and 8 as Factors

You can use what you know about multiplying 2, 3, 4, and 5 – and a little bit of addition – to help you multiply by 6, 7, and 8.

You can double a 3s fact to find any multiple of 6. To find $6 \times 9$ , multiply:  $3 \times 9 = 27$ $3 \times 9 = 27$  Then add: $27 + 27 = 54$	You can use a 5s fact plus a 2s fact to find any multiple of 7. To find $7 \times 4$ , multiply:  $5 \times 4 = 20$ $2 \times 4 = 8$  Then add: $20 + 8 = 28$	You can double a 4s fact to find any multiple of 8. To find $8 \times 8$ , multiply:  $4 \times 8 = 32$ $4 \times 8 = 32$  Then add: $32 + 32 = 64$
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### Exploring Patterns in Multiples of 10, 11, and 12

Here's how to find the multiples of 10, 11, and 12:

Multiples of 10	Multiples of 11	Multiples of 12
To multiply a number by 10, add a 0 to the end of the number being multiplied by 10.  $10 \times 4 = 40$ $10 \times 5 = 50$ $10 \times 6 = 60$ $10 \times 7 = 70$	To multiply a number less than 10 by 11, write the number being multiplied by 11 in the tens place and the ones place.  $11 \times 3 = 33$ $11 \times 4 = 44$ $11 \times 5 = 55$	To multiply a number by 12, find the multiple of 10, and then add twice the number. To find $12 \times 4$ , multiply:  $10 \times 4 = 40$ $2 \times 4 = 8$ $40 + 8 = 48$

### Exploring Factors

Factors are numbers that go into other numbers evenly, without a remainder. A “prime number” is a whole number that is greater than 1 and has only two factors, 1 and itself: 2, 3, 5, 7, etc. A “composite number” is a whole number that's greater than 1 and has at least three factors: 4, 6, 8, 9, etc. To figure out whether a number is prime or composite, systematically check it. Ask yourself: Is there a 2s fact that has this number as a product? A 3s fact? A 4s fact?...

Name \_\_\_\_\_

## Reviewing the Meaning of Multiplication

Complete each number sentence.



a. \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

b. \_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_



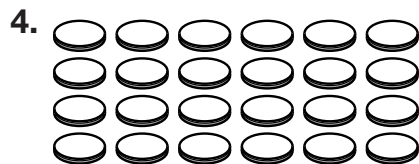
a. \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

b. \_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_



a. \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

b. \_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_



a. \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

b. \_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_

5. Draw two different pictures to show  $2 \times 5$ .

6. Can you use multiplication to find  $7 + 7 + 7$ ? Explain.

\_\_\_\_\_

## Answer Key

### Reviewing the Meaning of Multiplication

Complete each number sentence.



a.  $\underline{9} + \underline{9} = \underline{18}$

b.  $\underline{2} \times \underline{9} = \underline{18}$



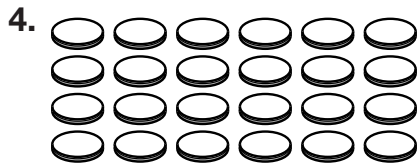
a.  $\underline{3} + \underline{3} + \underline{3} + \underline{3} = \underline{12}$

b.  $\underline{3} \times \underline{4} = \underline{12}$



a.  $\underline{5} + \underline{5} + \underline{5} = \underline{15}$

b.  $\underline{3} \times \underline{5} = \underline{15}$



a.  $\underline{6} + \underline{6} + \underline{6} + \underline{6} = \underline{24}$

b.  $\underline{4} \times \underline{6} = \underline{24}$

5. Draw two different pictures to show  $2 \times 5$ .



6. Can you use multiplication to find  $7 + 7 + 7$ ? Explain.

**Yes. 3 equal groups of 7 are  $3 \times 7 = 21$ .**

Name \_\_\_\_\_

## Exploring Patterns in Multiplying by 0, 1, 2, 5, and 9

Complete.

1. Multiples of 2 end in \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, or \_\_\_\_\_.
2. Multiples of 5 end in \_\_\_\_\_ or \_\_\_\_\_.
3. Describe the pattern that multiples of 9 follow.

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4. Does  $4 \times 5 = 5 \times 4$ ? Explain.

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Find each product.

- |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|
| 5. $2 \times 4 =$ _____  | 6. $5 \times 3 =$ _____  | 7. $5 \times 9 =$ _____  |
| 8. $9 \times 3 =$ _____  | 9. $4 \times 5 =$ _____  | 10. $5 \times 6 =$ _____ |
| 11. $9 \times 6 =$ _____ | 12. $2 \times 6 =$ _____ | 13. $0 \times 1 =$ _____ |
| 14. $4 \times 1 =$ _____ | 15. $9 \times 9 =$ _____ | 16. $7 \times 5 =$ _____ |
| 17. $2 \times 8 =$ _____ | 18. $1 \times 5 =$ _____ | 19. $4 \times 9 =$ _____ |
| 20. $5 \times 5 =$ _____ | 21. $8 \times 0 =$ _____ | 22. $7 \times 2 =$ _____ |
| 23. $2 \times 0 =$ _____ | 24. $9 \times 2 =$ _____ | 25. $3 \times 2 =$ _____ |
| 26. $9 \times 1 =$ _____ | 27. $2 \times 5 =$ _____ | 28. $9 \times 8 =$ _____ |

29. Find the product of 5 and 5. \_\_\_\_\_

30. Find the product of 7 and 9. \_\_\_\_\_

31. Which is greater,  $3 \times 5$  or  $2 \times 6$ ? Explain.

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32. Which is less,  $5 \times 8$  or  $4 \times 9$ ? Explain.

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## Answer Key

### Exploring Patterns in Multiplying by 0, 1, 2, 5, and 9

Complete.

1. Multiples of 2 end in 0, 2, 4, 6, or 8.
2. Multiples of 5 end in 0 or 5.
3. Describe the pattern that multiples of 9 follow.

**Possible answers: The sum of the digits is always 9. The tens digit is 1 less than the other factor.**

4. Does  $4 \times 5 = 5 \times 4$ ? Explain.

**Yes: The Order Property states that two numbers can be multiplied in any order.**

Find each product.

- |                              |                              |                              |
|------------------------------|------------------------------|------------------------------|
| 5. $2 \times 4 =$ <u>8</u>   | 6. $5 \times 3 =$ <u>15</u>  | 7. $5 \times 9 =$ <u>45</u>  |
| 8. $9 \times 3 =$ <u>27</u>  | 9. $4 \times 5 =$ <u>20</u>  | 10. $5 \times 6 =$ <u>30</u> |
| 11. $9 \times 6 =$ <u>54</u> | 12. $2 \times 6 =$ <u>12</u> | 13. $0 \times 1 =$ <u>0</u>  |
| 14. $4 \times 1 =$ <u>4</u>  | 15. $9 \times 9 =$ <u>81</u> | 16. $7 \times 5 =$ <u>35</u> |
| 17. $2 \times 8 =$ <u>16</u> | 18. $1 \times 5 =$ <u>5</u>  | 19. $4 \times 9 =$ <u>36</u> |
| 20. $5 \times 5 =$ <u>25</u> | 21. $8 \times 0 =$ <u>0</u>  | 22. $7 \times 2 =$ <u>14</u> |
| 23. $2 \times 0 =$ <u>0</u>  | 24. $9 \times 2 =$ <u>18</u> | 25. $3 \times 2 =$ <u>6</u>  |
| 26. $9 \times 1 =$ <u>9</u>  | 27. $2 \times 5 =$ <u>10</u> | 28. $9 \times 8 =$ <u>72</u> |

29. Find the product of 5 and 5. 25
30. Find the product of 7 and 9. 63
31. Which is greater,  $3 \times 5$  or  $2 \times 6$ ? Explain.  
 **$3 \times 5$ ;  $3 \times 5 = 15$  and  $2 \times 6 = 12$**
32. Which is less,  $5 \times 8$  or  $4 \times 9$ ? Explain.

**$4 \times 9$ ;  $4 \times 9 = 36$  and  $5 \times 8 = 40$**



Name \_\_\_\_\_

## Multiplying with 3 and 4 as Factors

Find each product.

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

2. 
$$\begin{array}{r} 4 \\ \times 2 \\ \hline \end{array}$$

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

4. 
$$\begin{array}{r} 3 \\ \times 6 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 5 \\ \times 3 \\ \hline \end{array}$$

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

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

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

9. 
$$\begin{array}{r} 7 \\ \times 3 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 8 \\ \times 4 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 3 \\ \times 2 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} 3 \\ \times 4 \\ \hline \end{array}$$

13. 
$$\begin{array}{r} 4 \\ \times 9 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} 3 \\ \times 8 \\ \hline \end{array}$$

15. 
$$\begin{array}{r} 4 \\ \times 4 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} 9 \\ \times 3 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} 3 \\ \times 1 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 4 \\ \times 1 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} 4 \\ \times 8 \\ \hline \end{array}$$

20. 
$$\begin{array}{r} 3 \\ \times 5 \\ \hline \end{array}$$

21.  $6 \times 4 =$  \_\_\_\_\_ 22.  $4 \times 3 =$  \_\_\_\_\_ 23.  $5 \times 7 =$  \_\_\_\_\_

24.  $7 \times 3 =$  \_\_\_\_\_ 25.  $0 \times 3 =$  \_\_\_\_\_ 26.  $1 \times 4 =$  \_\_\_\_\_

27. Find the product of 4 and 7. \_\_\_\_\_

28. Find the product of 9 and 3. \_\_\_\_\_

29. Find the product of 8 and 3. \_\_\_\_\_

30. Find the product of 4 and 6. \_\_\_\_\_

31. To multiply 8 by 3, you can find the product of 2 and 8  
and the product of 1 and 8 and \_\_\_\_\_ them.

32. To multiply 4 by 7, you can find the product of 5 and 7  
and \_\_\_\_\_ the product of 1 and 7.

## Answer Key

### Multiplying with 3 and 4 as Factors

Find each product.

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

$$\begin{array}{r} 2. \quad 4 \\ \times 2 \\ \hline 8 \end{array}$$

$$\begin{array}{r} 3. \quad 3 \\ \times 3 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 4. \quad 3 \\ \times 6 \\ \hline 18 \end{array}$$

$$\begin{array}{r} 5. \quad 5 \\ \times 3 \\ \hline 15 \end{array}$$

$$\begin{array}{r} 6. \quad 6 \\ \times 4 \\ \hline 24 \end{array}$$

$$\begin{array}{r} 7. \quad 4 \\ \times 7 \\ \hline 28 \end{array}$$

$$\begin{array}{r} 8. \quad 5 \\ \times 4 \\ \hline 20 \end{array}$$

$$\begin{array}{r} 9. \quad 7 \\ \times 3 \\ \hline 21 \end{array}$$

$$\begin{array}{r} 10. \quad 8 \\ \times 4 \\ \hline 32 \end{array}$$

$$\begin{array}{r} 11. \quad 3 \\ \times 2 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 12. \quad 3 \\ \times 4 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 13. \quad 4 \\ \times 9 \\ \hline 36 \end{array}$$

$$\begin{array}{r} 14. \quad 3 \\ \times 8 \\ \hline 24 \end{array}$$

$$\begin{array}{r} 15. \quad 4 \\ \times 4 \\ \hline 16 \end{array}$$

$$\begin{array}{r} 16. \quad 9 \\ \times 3 \\ \hline 27 \end{array}$$

$$\begin{array}{r} 17. \quad 3 \\ \times 1 \\ \hline 3 \end{array}$$

$$\begin{array}{r} 18. \quad 4 \\ \times 1 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 19. \quad 4 \\ \times 8 \\ \hline 32 \end{array}$$

$$\begin{array}{r} 20. \quad 3 \\ \times 5 \\ \hline 15 \end{array}$$

$$21. 6 \times 4 = \underline{24} \quad 22. 4 \times 3 = \underline{12} \quad 23. 5 \times 7 = \underline{35}$$

$$24. 7 \times 3 = \underline{21} \quad 25. 0 \times 3 = \underline{0} \quad 26. 1 \times 4 = \underline{4}$$

$$27. \text{ Find the product of 4 and 7. } \underline{28}$$

$$28. \text{ Find the product of 9 and 3. } \underline{27}$$

$$29. \text{ Find the product of 8 and 3. } \underline{24}$$

$$30. \text{ Find the product of 4 and 6. } \underline{24}$$

31. To multiply 8 by 3, you can find the product of 2 and 8 and the product of 1 and 8 and add them.

32. To multiply 4 by 7, you can find the product of 5 and 7 and subtract the product of 1 and 7.

Name \_\_\_\_\_

## Multiplying with 6, 7, and 8 as Factors

Find each product.

1.  $7 \times 3 =$  \_\_\_\_\_ 2.  $6 \times 4 =$  \_\_\_\_\_ 3.  $8 \times 6 =$  \_\_\_\_\_

4.  $4 \times 2 =$  \_\_\_\_\_ 5.  $8 \times 7 =$  \_\_\_\_\_ 6.  $6 \times 8 =$  \_\_\_\_\_

7.  $8 \times 3 =$  \_\_\_\_\_ 8.  $7 \times 2 =$  \_\_\_\_\_ 9.  $4 \times 1 =$  \_\_\_\_\_

10.  $6 \times 7 =$  \_\_\_\_\_ 11.  $8 \times 9 =$  \_\_\_\_\_ 12.  $9 \times 7 =$  \_\_\_\_\_

13.  $7 \times 7 =$  \_\_\_\_\_ 14.  $6 \times 3 =$  \_\_\_\_\_ 15.  $6 \times 6 =$  \_\_\_\_\_

16.  $8 \times 8 =$  \_\_\_\_\_ 17.  $5 \times 6 =$  \_\_\_\_\_ 18.  $6 \times 9 =$  \_\_\_\_\_

19. 
$$\begin{array}{r} 6 \\ \times 3 \\ \hline \end{array}$$

20. 
$$\begin{array}{r} 3 \\ \times 8 \\ \hline \end{array}$$

21. 
$$\begin{array}{r} 8 \\ \times 5 \\ \hline \end{array}$$

22. 
$$\begin{array}{r} 4 \\ \times 6 \\ \hline \end{array}$$

23. 
$$\begin{array}{r} 8 \\ \times 3 \\ \hline \end{array}$$

24. 
$$\begin{array}{r} 7 \\ \times 4 \\ \hline \end{array}$$

25. 
$$\begin{array}{r} 3 \\ \times 6 \\ \hline \end{array}$$

26. 
$$\begin{array}{r} 2 \\ \times 7 \\ \hline \end{array}$$

27. 
$$\begin{array}{r} 4 \\ \times 7 \\ \hline \end{array}$$

28. 
$$\begin{array}{r} 2 \\ \times 6 \\ \hline \end{array}$$

29. 
$$\begin{array}{r} 4 \\ \times 8 \\ \hline \end{array}$$

30. 
$$\begin{array}{r} 8 \\ \times 4 \\ \hline \end{array}$$

31. 
$$\begin{array}{r} 8 \\ \times 6 \\ \hline \end{array}$$

32. 
$$\begin{array}{r} 5 \\ \times 7 \\ \hline \end{array}$$

33. 
$$\begin{array}{r} 7 \\ \times 8 \\ \hline \end{array}$$

34. 
$$\begin{array}{r} 6 \\ \times 7 \\ \hline \end{array}$$

35. Draw an array for  $8 \times 8 = 64$ . Explain why it makes sense to call 64 a square number.

\_\_\_\_\_

## Answer Key

### Multiplying with 6, 7, and 8 as Factors

Find each product.

- |                              |                              |                              |
|------------------------------|------------------------------|------------------------------|
| 1. $7 \times 3 =$ <u>21</u>  | 2. $6 \times 4 =$ <u>24</u>  | 3. $8 \times 6 =$ <u>48</u>  |
| 4. $4 \times 2 =$ <u>8</u>   | 5. $8 \times 7 =$ <u>56</u>  | 6. $6 \times 8 =$ <u>48</u>  |
| 7. $8 \times 3 =$ <u>24</u>  | 8. $7 \times 2 =$ <u>14</u>  | 9. $4 \times 1 =$ <u>4</u>   |
| 10. $6 \times 7 =$ <u>42</u> | 11. $8 \times 9 =$ <u>72</u> | 12. $9 \times 7 =$ <u>63</u> |
| 13. $7 \times 7 =$ <u>49</u> | 14. $6 \times 3 =$ <u>18</u> | 15. $6 \times 6 =$ <u>36</u> |
| 16. $8 \times 8 =$ <u>64</u> | 17. $5 \times 6 =$ <u>30</u> | 18. $6 \times 9 =$ <u>54</u> |

- |   |   |   |   |
|---|---|---|---|
| 19. $\begin{array}{r} 6 \\ \times 3 \\ \hline 18 \end{array}$ | 20. $\begin{array}{r} 3 \\ \times 8 \\ \hline 24 \end{array}$ | 21. $\begin{array}{r} 8 \\ \times 5 \\ \hline 40 \end{array}$ | 22. $\begin{array}{r} 4 \\ \times 6 \\ \hline 24 \end{array}$ |
| 23. $\begin{array}{r} 8 \\ \times 3 \\ \hline 24 \end{array}$ | 24. $\begin{array}{r} 7 \\ \times 4 \\ \hline 28 \end{array}$ | 25. $\begin{array}{r} 3 \\ \times 6 \\ \hline 18 \end{array}$ | 26. $\begin{array}{r} 2 \\ \times 7 \\ \hline 14 \end{array}$ |
| 27. $\begin{array}{r} 4 \\ \times 7 \\ \hline 28 \end{array}$ | 28. $\begin{array}{r} 2 \\ \times 6 \\ \hline 12 \end{array}$ | 29. $\begin{array}{r} 4 \\ \times 8 \\ \hline 32 \end{array}$ | 30. $\begin{array}{r} 8 \\ \times 4 \\ \hline 32 \end{array}$ |
| 31. $\begin{array}{r} 8 \\ \times 6 \\ \hline 48 \end{array}$ | 32. $\begin{array}{r} 5 \\ \times 7 \\ \hline 35 \end{array}$ | 33. $\begin{array}{r} 7 \\ \times 8 \\ \hline 56 \end{array}$ | 34. $\begin{array}{r} 6 \\ \times 7 \\ \hline 42 \end{array}$ |

35. Draw an array for  $8 \times 8 = 64$ . Explain why it makes sense to call 64 a square number. **Check students' drawings.**

**The array is a square;  $8 \times 8$**

---

Name \_\_\_\_\_

## Exploring Patterns in Multiples of 10, 11, and 12

Complete.

1. Multiples of 10 end in \_\_\_\_\_.
2. Describe the pattern that multiples of 11 follow.

\_\_\_\_\_

3. Multiples of 12 end in \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ or \_\_\_\_\_.

Find each product.

- |                            |                            |                           |
|----------------------------|----------------------------|---------------------------|
| 4. $10 \times 2 =$ _____   | 5. $11 \times 7 =$ _____   | 6. $10 \times 6 =$ _____  |
| 7. $5 \times 10 =$ _____   | 8. $4 \times 11 =$ _____   | 9. $12 \times 7 =$ _____  |
| 10. $10 \times 3 =$ _____  | 11. $12 \times 6 =$ _____  | 12. $10 \times 7 =$ _____ |
| 13. $11 \times 3 =$ _____  | 14. $3 \times 12 =$ _____  | 15. $2 \times 11 =$ _____ |
| 16. $10 \times 11 =$ _____ | 17. $4 \times 12 =$ _____  | 18. $9 \times 11 =$ _____ |
| 19. $12 \times 5 =$ _____  | 20. $11 \times 11 =$ _____ | 21. $11 \times 8 =$ _____ |
| 22. $12 \times 12 =$ _____ | 23. $2 \times 12 =$ _____  | 24. $10 \times 5 =$ _____ |

25. How can you use the fact  $11 \times 6 = 66$  to solve  $11 \times 7$ ?

\_\_\_\_\_  
\_\_\_\_\_

26. If you have 4 dozen bagels, how many bagels do you have?  
Explain.

\_\_\_\_\_

27. Sophie has 6 jelly beans. Ted has 10 times as many.  
How many jelly beans does Ted have? Explain.

\_\_\_\_\_

## Answer Key

### Exploring Patterns in Multiples of 10, 11, and 12

Complete.

1. Multiples of 10 end in 0.

2. Describe the pattern that multiples of 11 follow.

Possible answer: The ones digit increases by 1 each time.

3. Multiples of 12 end in 0, 2, 4, 6 or 8.

Find each product.

4.  $10 \times 2 =$  20      5.  $11 \times 7 =$  77      6.  $10 \times 6 =$  60

7.  $5 \times 10 =$  50      8.  $4 \times 11 =$  44      9.  $12 \times 7 =$  84

10.  $10 \times 3 =$  30      11.  $12 \times 6 =$  72      12.  $10 \times 7 =$  70

13.  $11 \times 3 =$  33      14.  $3 \times 12 =$  36      15.  $2 \times 11 =$  22

16.  $10 \times 11 =$  110      17.  $4 \times 12 =$  48      18.  $9 \times 11 =$  99

19.  $12 \times 5 =$  60      20.  $11 \times 11 =$  121      21.  $11 \times 8 =$  88

22.  $12 \times 12 =$  144      23.  $2 \times 12 =$  24      24.  $10 \times 5 =$  50

25. How can you use the fact  $11 \times 6 = 66$  to solve  $11 \times 7$ ?

Possible answer: Add 11 to 66 to get 77.

26. If you have 4 dozen bagels, how many bagels do you have? Explain.

48: There are 12 bagels in a dozen.  $4 \times 12 = 48$  bagels

27. Sophie has 6 jelly beans. Ted has 10 times as many. How many jelly beans does Ted have? Explain.

60;  $6 \times 10 = 60$

Name \_\_\_\_\_

## Exploring Factors

Write a definition for each term.

1. factor \_\_\_\_\_

2. prime \_\_\_\_\_

3. composite \_\_\_\_\_

Complete. Then list all the factors for each number.

4.  $\square \times \square = 6$

5.  $\square \times \square = 8$

6.  $\square \times \square = 9$

$\square \times \square = 6$

$\square \times \square = 8$

$\square \times \square = 9$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

List all the factors for each number. You may draw rectangles on grid paper to help you.

7. 14: \_\_\_\_\_

8. 32: \_\_\_\_\_

9. 23: \_\_\_\_\_

10. 18: \_\_\_\_\_

Write whether each number is prime or composite.

11. 15 \_\_\_\_\_ 12. 17 \_\_\_\_\_ 13. 13 \_\_\_\_\_

14. 66 \_\_\_\_\_ 15. 63 \_\_\_\_\_ 16. 16 \_\_\_\_\_

17. 14 \_\_\_\_\_ 18. 31 \_\_\_\_\_ 19. 51 \_\_\_\_\_

Complete each list of prime numbers.

20. 3, 5, 7, \_\_\_\_\_ 21. 31, 37, 39, \_\_\_\_\_

22. 23, 29, 31, \_\_\_\_\_ 23. 7, 11, 13, \_\_\_\_\_

Complete each list of composite numbers.

24. 12, 14, 15, \_\_\_\_\_ 25. 35, 36, 38, \_\_\_\_\_

26. 2, 4, 6, \_\_\_\_\_ 27. 20, 21, 22, \_\_\_\_\_

## Answer Key

### Exploring Factors

Write a definition for each term.

1. factor A factor is a number that divides another number evenly.
2. prime A prime number has only 2 factors: itself and 1.
3. composite A composite number has more than 2 factors.

Complete. Then list all the factors for each number.

- |                                     |                                     |                                     |
|-------------------------------------|-------------------------------------|-------------------------------------|
| 4. $\boxed{1} \times \boxed{6} = 6$ | 5. $\boxed{1} \times \boxed{8} = 8$ | 6. $\boxed{1} \times \boxed{9} = 9$ |
| $\boxed{3} \times \boxed{2} = 6$    | $\boxed{2} \times \boxed{4} = 8$    | $\boxed{3} \times \boxed{3} = 9$    |
| <u>1, 2, 3, 6</u>                   | <u>1, 2, 4, 8</u>                   | <u>1, 3, 9</u>                      |

List all the factors for each number. You may draw rectangles on grid paper to help you.

7. 14: 1, 2, 7, 14
8. 32: 1, 2, 4, 8, 16, 32
9. 23: 1, 23
10. 18: 1, 2, 3, 6, 9

Write whether each number is prime or composite.

- |                         |                         |                         |
|-------------------------|-------------------------|-------------------------|
| 11. 15 <u>Composite</u> | 12. 17 <u>Prime</u>     | 13. 13 <u>Prime</u>     |
| 14. 66 <u>Composite</u> | 15. 63 <u>Composite</u> | 16. 16 <u>Composite</u> |
| 17. 14 <u>Composite</u> | 18. 31 <u>Prime</u>     | 19. 51 <u>Prime</u>     |

Complete each list of prime numbers.

- |                                       |                                       |
|---------------------------------------|---------------------------------------|
| 20. 3, 5, 7, <u>11</u> , <u>13</u>    | 21. 31, 37, 39, <u>41</u> , <u>43</u> |
| 22. 23, 29, 31, <u>37</u> , <u>39</u> | 23. 7, 11, 13, <u>17</u> , <u>19</u>  |

Complete each list of composite numbers.

- |                                       |                                       |
|---------------------------------------|---------------------------------------|
| 24. 12, 14, 15, <u>16</u> , <u>18</u> | 25. 35, 36, 38, <u>39</u> , <u>40</u> |
| 26. 2, 4, 6, <u>8</u> , <u>10</u>     | 27. 20, 21, 22, <u>24</u> , <u>25</u> |



## Math Hints and Reminders: Multiplying by 1-Digit Factors

### Multiplying Tens

You probably already know the multiples of 10, right? (10, 20, 30, 40, 50, etc.) Now, to multiply by these numbers, just use the basic multiplication facts that you already know, and tack a zero onto the product:  $7 \times 60 = 420$  or  $7 \times 6 \text{ tens} = 42 \text{ tens}$ .

### Exploring Multiplication Patterns

Once you have a basic multiplication fact down, like  $6 \times 6 = 36$ , multiplying by tens, hundreds, and thousands is just a matter of counting up the number of zeros in the factors and tacking them onto the basic fact. Take a look at the pattern:

$6 \times 6 = 36$
$6 \times 60 = 360$
$6 \times 600 = 3,600$
$6 \times 6,000 = 36,000$
$6 \times 60,000 = 360,000$

### Estimating Products

Some questions don't require an exact answer. Sometimes an estimate will do! To estimate answers for multiplication problems, first you need to "round" one of the factors to a number that's easy to work with – such as a number that ends in zero. Then use your basic multiplication facts.

Here's a tip to help you with rounding: Circle the leading digit in the number and then underline the digit to its right. If the underlined digit is less than 5, round down to the nearest ten or hundred. If the underlined digit is greater than or equal to 5, round up to the nearest ten or hundred:  $\underline{6}5 \rightarrow 70$        $\underline{6}26 \rightarrow 600$ .

### Multiplying 2-Digit Numbers

There are a couple of ways you can multiply by a 2-digit number. You can "regroup," or name a number in a different way: 13 ones = 1 ten and 3 ones. You can also use "partial products": Multiply the ones and record the product, multiply the tens and record the product and add to reach an answer. Here's how both methods work:

To find $6 \times 27$ using regrouping...	
<div>Multiply the ones. Regroup.</div> <div><math display="block">\begin{array}{r} 4 \\ 27 \\ \times 6 \\ \hline 2 \end{array}</math><math>6 \times 7 = 42 \text{ ones}</math></div> <div>Regroup 42 ones as 4 tens and 2 ones.</div>	<div>Multiply the tens. Add the extra tens.</div> <div><math display="block">\begin{array}{r} 4 \\ 27 \\ \times 6 \\ \hline 162 \end{array}</math><math>6 \times 2 = 12 \text{ tens}</math><math>12 + 4 = 16 \text{ tens}</math></div> <div>So... <math>6 \times 27 = 162</math></div>

To find $2 \times 26$ using partial products...	
<p>Multiply the ones.</p> $\begin{array}{r} 26 \\ \times 2 \\ \hline 12 \end{array}$ <p><math>2 \times 6 = 12</math> ones</p>	<p>Multiply the tens.</p> $\begin{array}{r} 26 \\ \times 2 \\ \hline 12 \\ 40 \\ \hline 52 \end{array}$ <p><math>2 \times 2</math> tens = 4 tens or 40</p> <p>Add the products. So... <math>26 \times 2 = 52</math></p>

### Multiplying 3-Digit Numbers

Seeing 3-digit numbers in a multiplication problem can be intimidating, but it's really not much harder than what you've already been doing. Whether you're multiplying with 2 digits or 3 digits, the rules are the same. You just have to follow them one extra time!

### Multiplying Money

Multiplying money is just like multiplying other numbers, but with an added twist! When you're done multiplying, you add a dollar sign to the left of the answer, and a decimal point to the left of the tens place. Just how important is that little decimal point? Well, what's the difference between \$5,070 and \$50.70? About \$5,000... big difference!

### Mental Math: Special Products

Mental math may sound like some strange telekinetic number game, but it's really just about multiplying numbers quickly, in your head. The key to multiplying in your head is to break a problem down into numbers that are easy to work with, such as numbers that end in zero.

Find $44 \times 2$	Find $98 \times 3$
<p>Think of 44 as <math>40 + 4</math></p> <p><math>40 \times 2 = 80</math>      and      <math>4 \times 2 = 8</math></p> <p><math>80 + 8 = 88</math></p> <p>So... <math>44 \times 2 = 88</math></p>	<p>Think of 98 as almost 100</p> <p><math>100 \times 3 = 300</math></p> <p>Subtract 2 groups of 3 <math>\rightarrow 300 - 6 = 294</math></p> <p>So... <math>98 \times 3 = 294</math></p>

When you round up to reach a workable number, subtract in the next step. When you round down, add in the next step.

### Multiplying 3 Factors

When you're multiplying 3 factors, the parentheses tell you which numbers to multiply first. Keep in mind that changing the grouping of the numbers will **not** change the product. When choosing which numbers to multiply first, your best

bet (in most cases!) is to start off with the two least factors. This usually makes multiplying the third factor a little simpler.

Name \_\_\_\_\_

## Multiplying Tens

Use a multiplication fact table to help you find each product.

1.  $4 \times 2$  tens = \_\_\_\_\_ tens      2.  $6 \times 3$  tens = \_\_\_\_\_ tens

$4 \times 20$  = \_\_\_\_\_       $6 \times 30$  = \_\_\_\_\_

3.  $3 \times 7$  tens = \_\_\_\_\_ tens      4.  $5 \times 8$  tens = \_\_\_\_\_ tens

$3 \times 70$  = \_\_\_\_\_       $5 \times 80$  = \_\_\_\_\_

5.  $7 \times 9$  tens = \_\_\_\_\_ tens      6.  $2 \times 8$  tens = \_\_\_\_\_ tens

$7 \times 90$  = \_\_\_\_\_       $2 \times 80$  = \_\_\_\_\_

7.  $4 \times 4$  tens = \_\_\_\_\_ tens      8.  $8 \times 7$  tens = \_\_\_\_\_ tens

$4 \times 40$  = \_\_\_\_\_       $8 \times 70$  = \_\_\_\_\_

9.  $9 \times 80$  = \_\_\_\_\_      10.  $6 \times 70$  = \_\_\_\_\_      11.  $3 \times 80$  = \_\_\_\_\_

12.  $4 \times 60$  = \_\_\_\_\_      13.  $6 \times 50$  = \_\_\_\_\_      14.  $4 \times 40$  = \_\_\_\_\_

15.  $8 \times 10$  = \_\_\_\_\_      16.  $6 \times 60$  = \_\_\_\_\_      17.  $9 \times 20$  = \_\_\_\_\_

18.  $7 \times 20$  = \_\_\_\_\_      19.  $7 \times 50$  = \_\_\_\_\_      20.  $6 \times 80$  = \_\_\_\_\_

21.  $9 \times 10$  = \_\_\_\_\_      22.  $5 \times 10$  = \_\_\_\_\_      23.  $3 \times 70$  = \_\_\_\_\_

24.  $9 \times 40$  = \_\_\_\_\_      25.  $3 \times 60$  = \_\_\_\_\_      26.  $8 \times 50$  = \_\_\_\_\_

27.  $8 \times 70$  = \_\_\_\_\_      28.  $9 \times 30$  = \_\_\_\_\_      29.  $9 \times 60$  = \_\_\_\_\_

30.  $7 \times 30$  = \_\_\_\_\_      31.  $3 \times 90$  = \_\_\_\_\_      32.  $8 \times 20$  = \_\_\_\_\_

33. Can you use the same multiplication fact to find  $3 \times 60$  and  $2 \times 90$ ? Explain.

\_\_\_\_\_  
\_\_\_\_\_

34. Can you use the same multiplication fact to find  $4 \times 60$  and  $6 \times 40$ ? Explain.

\_\_\_\_\_  
\_\_\_\_\_

## Answer Key

### Multiplying Tens

Use a multiplication fact table to help you find each product.

1.  $4 \times 2$  tens = 8 tens      2.  $6 \times 3$  tens = 18 tens

$4 \times 20 =$  80       $6 \times 30 =$  180

3.  $3 \times 7$  tens = 21 tens      4.  $5 \times 8$  tens = 40 tens

$3 \times 70 =$  210       $5 \times 80 =$  400

5.  $7 \times 9$  tens = 63 tens      6.  $2 \times 8$  tens = 16 tens

$7 \times 90 =$  630       $2 \times 80 =$  160

7.  $4 \times 4$  tens = 16 tens      8.  $8 \times 7$  tens = 56 tens

$4 \times 40 =$  160       $8 \times 70 =$  560

9.  $9 \times 80 =$  720      10.  $6 \times 70 =$  420      11.  $3 \times 80 =$  240

12.  $4 \times 60 =$  240      13.  $6 \times 50 =$  300      14.  $4 \times 40 =$  160

15.  $8 \times 10 =$  80      16.  $6 \times 60 =$  360      17.  $9 \times 20 =$  180

18.  $7 \times 20 =$  140      19.  $7 \times 50 =$  350      20.  $6 \times 80 =$  480

21.  $9 \times 10 =$  90      22.  $5 \times 10 =$  50      23.  $3 \times 70 =$  210

24.  $9 \times 40 =$  360      25.  $3 \times 60 =$  180      26.  $8 \times 50 =$  400

27.  $8 \times 70 =$  560      28.  $9 \times 30 =$  270      29.  $9 \times 60 =$  540

30.  $7 \times 30 =$  210      31.  $3 \times 90 =$  270      32.  $8 \times 20 =$  160

33. Can you use the same multiplication fact to find  $3 \times 60$  and  $2 \times 90$ ? Explain.

No. The multiplication facts are different, even though the products are the same.

34. Can you use the same multiplication fact to find  $4 \times 60$  and  $6 \times 40$ ? Explain.

Yes.  $6 \times 4$  and  $4 \times 6$  both equal 24. So,  $4 \times 60$  and  $6 \times 40$  both equal 240.

Name \_\_\_\_\_

## Mental Math: Multiplying Multiples of 10, 100, and 1,000

1.  $7 \times 60$

\_\_\_\_\_

2.  $6 \times 300$

\_\_\_\_\_

3.  $5 \times 9,000$

\_\_\_\_\_

4.  $3 \times 4,000$

\_\_\_\_\_

5.  $4 \times 70$

\_\_\_\_\_

6.  $9 \times 80$

\_\_\_\_\_

7.  $8 \times 400$

\_\_\_\_\_

8.  $8 \times 5,000$

\_\_\_\_\_

9.  $5 \times 700$

\_\_\_\_\_

10.  $7 \times 9,000$

\_\_\_\_\_

11.  $6 \times 6,000$

\_\_\_\_\_

12.  $3 \times 9,000$

\_\_\_\_\_

Use the information in the table to solve Exercises 13 and 14.

13. If Mary can say 300 words in 1 minute, how many words can she say in 5 minutes?

\_\_\_\_\_

14. Both John and Sergio read aloud for 6 minutes. How many more words does John read than Sergio?

\_\_\_\_\_

Person	Number of words said in one minute
Anna	200
Mary	300
Sergio	400
John	600

15. Algebra Find the value of  $5n$  if  $n = 4,000$ . \_\_\_\_\_

16. Math Reasoning What happens to the product of  $2 \times 300$  if both factors are tripled?

\_\_\_\_\_

\_\_\_\_\_

**Test Prep** Circle the correct letter for the answer.

17. When a number is multiplied by 8, the product is 64,000. What is the number?

**A** 80

**B** 800

**C** 8,000

**D** 80,000

# Answer Key

## Mental Math: Multiplying Multiples of 10, 100, and 1,000

1.  $7 \times 60$

420

2.  $6 \times 300$

1,800

3.  $5 \times 9,000$

45,000

4.  $3 \times 4,000$

12,000

5.  $4 \times 70$

280

6.  $9 \times 80$

720

7.  $8 \times 400$

3,200

8.  $8 \times 5,000$

40,000

9.  $5 \times 700$

3,500

10.  $7 \times 9,000$

63,000

11.  $6 \times 6,000$

36,000

12.  $3 \times 9,000$

27,000

Use the information in the table to solve Exercises 13 and 14.

13. If Mary can say 300 words in 1 minute, how many words can she say in 5 minutes?

1,500 words

14. Both John and Sergio read aloud for 6 minutes. How many more words does John read than Sergio?

1,200 words

Person	Number of words said in one minute
Anna	200
Mary	300
Sergio	400
John	600

15. Algebra Find the value of  $5n$  if  $n = 4,000$ . 20,000

16. Math Reasoning What happens to the product of  $2 \times 300$  if both factors are tripled?

The new product,  $6 \times 900 = 5,400$ , is 9 times as great as the original product,  $2 \times 300 = 600$ .

**Test Prep** Circle the correct letter for the answer.

17. When a number is multiplied by 8, the product is 64,000. What is the number?

**A** 80

**B** 800

**C** 8,000

**D** 80,000

Name \_\_\_\_\_

## Estimating Products

Round so you can estimate the product mentally.

1.  $3 \times 323$  \_\_\_\_\_ 2.  $2 \times \$19.63$  \_\_\_\_\_ 3.  $4,798 \times 6$  \_\_\_\_\_

4.  $7 \times \$7.35$  \_\_\_\_\_ 5.  $4 \times \$6.94$  \_\_\_\_\_ 6.  $3,052 \times 8$  \_\_\_\_\_

7. Is 6,704 a reasonable answer for  $856 \times 9$ ? Estimate by finding a range.

---

---

8. Is 14,949 a reasonable answer for  $3 \times 4,983$ ? Estimate by finding a range.

---

---

9. **Math Reasoning** In the number sentence  $7 \times 989$ , when you round 989 up to 1,000, will your estimate be more or less than the exact product? Explain.

---

---

**Test Prep** Circle the correct letter for each answer. Use the information in the table to solve Exercises 10–11.

10. About how much laundry did the four families wash in one month altogether?

**A** About 350 lb      **C** About 263 lb

**B** About 250 lb      **D** About 150 lb

11. Estimate how much more laundry the Adams family did than the King family in 3 months.

**F** About 480 lb      **H** About 120 lb

**G** About 204 lb      **J** About 80 lb

Laundry per Month	
Family	Numbers of Pounds
Washington	46
Carver	37
Adams	124
King	56



# Answer Key

## Estimating Products

Round so you can estimate the product mentally.

1.  $3 \times 323$  900

2.  $2 \times \$19.63$  \$40

3.  $4,798 \times 6$  30,000

4.  $7 \times \$7.35$  \$49

5.  $4 \times \$6.94$  \$28

6.  $3,052 \times 8$  24,000

7. Is 6,704 a reasonable answer for  $856 \times 9$ ? Estimate by finding a range.

**No; The answer must be between**

**$900 \times 9 = 8,100$  and  $800 \times 9 = 7,200$ .**

8. Is 14,949 a reasonable answer for  $3 \times 4,983$ ? Estimate by finding a range.

**Yes; The answer must be between**

**$3 \times 5,000 = 15,000$  and  $3 \times 4,000 = 12,000$ .**

9. **Math Reasoning** In the number sentence  $7 \times 989$ , when you round 989 up to 1,000, will your estimate be more or less than the exact product? Explain.

**More than; the rounded factor is greater than the original factor.**

**Test Prep** Circle the correct letter for each answer. Use the information in the table to solve Exercises 10–11.

10. About how much laundry did the four families wash in one month altogether?

**A** About 350 lb

**C** About 263 lb

**B** About 250 lb

**D** About 150 lb

11. Estimate how much more laundry the Adams family did than the King family in 3 months.

**F** About 480 lb

**H** About 120 lb

**G** About 204 lb

**J** About 80 lb

Laundry per Month	
Family	Numbers of Pounds
Washington	46
Carver	37
Adams	124
King	56

Name \_\_\_\_\_

## Multiplying 2-Digit Numbers

Find each product. Estimate to check.

1. 
$$\begin{array}{r} 94 \\ \times 8 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 32 \\ \times 7 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 37 \\ \times 4 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 93 \\ \times 5 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 85 \\ \times 2 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 46 \\ \times 8 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 92 \\ \times 6 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 29 \\ \times 3 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 66 \\ \times 8 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 41 \\ \times 3 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 80 \\ \times 7 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} 56 \\ \times 7 \\ \hline \end{array}$$

13. 
$$\begin{array}{r} 86 \\ \times 9 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} 57 \\ \times 4 \\ \hline \end{array}$$

15. 
$$\begin{array}{r} 79 \\ \times 6 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} 34 \\ \times 2 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} 33 \\ \times 2 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 54 \\ \times 8 \\ \hline \end{array}$$

19.  $27 \times 6 =$  \_\_\_\_\_ 20.  $81 \times 7 =$  \_\_\_\_\_ 21.  $47 \times 2 =$  \_\_\_\_\_

22. Find the product of 5 and 59. \_\_\_\_\_

23. Find the product of 46 and 4. \_\_\_\_\_

24. Estimate to decide if the product of 72 and 5 is less than or greater than 300.

\_\_\_\_\_

25. Use estimation to find the greater product:  $903 \times 2$  or  $803 \times 3$ .

\_\_\_\_\_

\_\_\_\_\_

## Answer Key

### Multiplying 2-Digit Numbers

Find each product. Estimate to check.

$$\begin{array}{r} 1. \quad 94 \\ \times 8 \\ \hline 752 \end{array}$$

$$\begin{array}{r} 2. \quad 32 \\ \times 7 \\ \hline 224 \end{array}$$

$$\begin{array}{r} 3. \quad 37 \\ \times 4 \\ \hline 148 \end{array}$$

$$\begin{array}{r} 4. \quad 93 \\ \times 5 \\ \hline 465 \end{array}$$

$$\begin{array}{r} 5. \quad 85 \\ \times 2 \\ \hline 170 \end{array}$$

$$\begin{array}{r} 6. \quad 46 \\ \times 8 \\ \hline 368 \end{array}$$

$$\begin{array}{r} 7. \quad 92 \\ \times 6 \\ \hline 552 \end{array}$$

$$\begin{array}{r} 8. \quad 29 \\ \times 3 \\ \hline 87 \end{array}$$

$$\begin{array}{r} 9. \quad 66 \\ \times 8 \\ \hline 528 \end{array}$$

$$\begin{array}{r} 10. \quad 41 \\ \times 3 \\ \hline 123 \end{array}$$

$$\begin{array}{r} 11. \quad 80 \\ \times 7 \\ \hline 560 \end{array}$$

$$\begin{array}{r} 12. \quad 56 \\ \times 7 \\ \hline 392 \end{array}$$

$$\begin{array}{r} 13. \quad 86 \\ \times 9 \\ \hline 774 \end{array}$$

$$\begin{array}{r} 14. \quad 57 \\ \times 4 \\ \hline 228 \end{array}$$

$$\begin{array}{r} 15. \quad 79 \\ \times 6 \\ \hline 474 \end{array}$$

$$\begin{array}{r} 16. \quad 34 \\ \times 2 \\ \hline 68 \end{array}$$

$$\begin{array}{r} 17. \quad 33 \\ \times 2 \\ \hline 66 \end{array}$$

$$\begin{array}{r} 18. \quad 54 \\ \times 8 \\ \hline 432 \end{array}$$

19.  $27 \times 6 =$  162    20.  $81 \times 7 =$  567    21.  $47 \times 2 =$  94

22. Find the product of 5 and 59. 295

23. Find the product of 46 and 4. 184

24. Estimate to decide if the product of 72 and 5 is less than or greater than 300.

Greater than

25. Use estimation to find the greater product:  $903 \times 2$  or  $803 \times 3$ .

$903 \times 2$  is about  $900 \times 2 = 1,800$ ;  $803 \times 3$  is about

$800 \times 3 = 2,400$ . 2,400 is the greater product.

Name \_\_\_\_\_

## Multiplying 3-Digit Numbers

Multiply.

1. 
$$\begin{array}{r} 362 \\ \times 9 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 547 \\ \times 7 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 396 \\ \times 4 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 457 \\ \times 8 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 606 \\ \times 6 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 421 \\ \times 3 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 543 \\ \times 9 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 729 \\ \times 5 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 622 \\ \times 8 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 304 \\ \times 8 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 607 \\ \times 4 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} 705 \\ \times 9 \\ \hline \end{array}$$

13. 
$$\begin{array}{r} 432 \\ \times 6 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} 804 \\ \times 7 \\ \hline \end{array}$$

15. 
$$\begin{array}{r} 618 \\ \times 8 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} 568 \\ \times 7 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} 724 \\ \times 4 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 365 \\ \times 9 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} 424 \\ \times 6 \\ \hline \end{array}$$

20. 
$$\begin{array}{r} 233 \\ \times 5 \\ \hline \end{array}$$

21. 
$$\begin{array}{r} 198 \\ \times 7 \\ \hline \end{array}$$

22. 
$$\begin{array}{r} 631 \\ \times 3 \\ \hline \end{array}$$

23. 
$$\begin{array}{r} 550 \\ \times 2 \\ \hline \end{array}$$

24. 
$$\begin{array}{r} 875 \\ \times 8 \\ \hline \end{array}$$

25.  $725 \times 8 =$  \_\_\_\_\_

26.  $7 \times 953 =$  \_\_\_\_\_

27.  $6 \times 849 =$  \_\_\_\_\_

28.  $4 \times 666 =$  \_\_\_\_\_

29. Find the product of 6 and 707. \_\_\_\_\_

30. Find the product of 3 and 214. \_\_\_\_\_

31. Multiply 6 and 337. \_\_\_\_\_

32. Multiply 8 and 856. \_\_\_\_\_

## Answer Key

### Multiplying 3-Digit Numbers

Multiply.

$$\begin{array}{r} 1. \quad 362 \\ \times \quad 9 \\ \hline 3,258 \end{array}$$

$$\begin{array}{r} 2. \quad 547 \\ \times \quad 7 \\ \hline 3,829 \end{array}$$

$$\begin{array}{r} 3. \quad 396 \\ \times \quad 4 \\ \hline 1,584 \end{array}$$

$$\begin{array}{r} 4. \quad 457 \\ \times \quad 8 \\ \hline 3,656 \end{array}$$

$$\begin{array}{r} 5. \quad 606 \\ \times \quad 6 \\ \hline 3,636 \end{array}$$

$$\begin{array}{r} 6. \quad 421 \\ \times \quad 3 \\ \hline 1,263 \end{array}$$

$$\begin{array}{r} 7. \quad 543 \\ \times \quad 9 \\ \hline 4,887 \end{array}$$

$$\begin{array}{r} 8. \quad 729 \\ \times \quad 5 \\ \hline 3,645 \end{array}$$

$$\begin{array}{r} 9. \quad 622 \\ \times \quad 8 \\ \hline 4,976 \end{array}$$

$$\begin{array}{r} 10. \quad 304 \\ \times \quad 8 \\ \hline 2,432 \end{array}$$

$$\begin{array}{r} 11. \quad 607 \\ \times \quad 4 \\ \hline 2,428 \end{array}$$

$$\begin{array}{r} 12. \quad 705 \\ \times \quad 9 \\ \hline 6,345 \end{array}$$

$$\begin{array}{r} 13. \quad 432 \\ \times \quad 6 \\ \hline 2,592 \end{array}$$

$$\begin{array}{r} 14. \quad 804 \\ \times \quad 7 \\ \hline 5,628 \end{array}$$

$$\begin{array}{r} 15. \quad 618 \\ \times \quad 8 \\ \hline 4,944 \end{array}$$

$$\begin{array}{r} 16. \quad 568 \\ \times \quad 7 \\ \hline 3,976 \end{array}$$

$$\begin{array}{r} 17. \quad 724 \\ \times \quad 4 \\ \hline 2,896 \end{array}$$

$$\begin{array}{r} 18. \quad 365 \\ \times \quad 9 \\ \hline 3,285 \end{array}$$

$$\begin{array}{r} 19. \quad 424 \\ \times \quad 6 \\ \hline 2,544 \end{array}$$

$$\begin{array}{r} 20. \quad 233 \\ \times \quad 5 \\ \hline 1,165 \end{array}$$

$$\begin{array}{r} 21. \quad 198 \\ \times \quad 7 \\ \hline 1,386 \end{array}$$

$$\begin{array}{r} 22. \quad 631 \\ \times \quad 3 \\ \hline 1,893 \end{array}$$

$$\begin{array}{r} 23. \quad 550 \\ \times \quad 2 \\ \hline 1,100 \end{array}$$

$$\begin{array}{r} 24. \quad 875 \\ \times \quad 8 \\ \hline 7,000 \end{array}$$

$$25. 725 \times 8 = \underline{5,800}$$

$$26. 7 \times 953 = \underline{6,671}$$

$$27. 6 \times 849 = \underline{5,094}$$

$$28. 4 \times 666 = \underline{2,664}$$

$$29. \text{ Find the product of 6 and 707. } \underline{4,242}$$

$$30. \text{ Find the product of 3 and 214. } \underline{642}$$

$$31. \text{ Multiply 6 and 337. } \underline{2,022}$$

$$32. \text{ Multiply 8 and 856. } \underline{6,848}$$

Name \_\_\_\_\_

## Multiplying with Money

1.  $\begin{array}{r} \$0.95 \\ \times 4 \\ \hline \end{array}$

2.  $\begin{array}{r} \$64.22 \\ \times 2 \\ \hline \end{array}$

3.  $\begin{array}{r} \$56.26 \\ \times 9 \\ \hline \end{array}$

4.  $\begin{array}{r} \$49.50 \\ \times 6 \\ \hline \end{array}$

5.  $\$0.79 \times 8$

6.  $\$114.65 \times 6$

7.  $\$4.37 \times 9$

8.  $\$237.92 \times 5$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

9. Andy bought 7 videos at the mall. Each video cost \$14.95. How much money did he spend?

\_\_\_\_\_

10. **Mental Math** Find  $6 \times \$300.00$ .

\_\_\_\_\_

Use the table at the right for Exercises 11–13.

11. What would the total cost be to make 3 of each item?

\_\_\_\_\_

12. How much would you collect altogether if you sold 4 hats, 2 T-shirts, and 5 buttons?

\_\_\_\_\_

Item	Cost to Make	Selling Price
Hat	\$2.75	\$4.55
T-Shirt	\$6.32	\$14.10
Button	\$0.58	\$0.95

13. Marie made \$18 for making and then selling 10 of one of the items shown in the table. Which item was she selling?

\_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

14. Joe bought 6 plates for \$5.99 each and 4 glasses for \$6.50 each. How much did he spend in all?

**A** \$65.50

**B** \$61.94

**C** \$55.95

**D** \$59.90

15. It costs you \$3.75 to make a bird house. How much money do you make if you sell 5 bird houses for \$6.00 each?

**F** \$30.00

**G** \$18.75

**H** \$11.25

**J** \$10.25

# Answer Key

## Multiplying with Money

$$\begin{array}{r} 1. \ \$0.95 \\ \times \ 4 \\ \hline \end{array}$$

**\$3.80**

$$\begin{array}{r} 2. \ \$64.22 \\ \times \ 2 \\ \hline \end{array}$$

**\$128.44**

$$\begin{array}{r} 3. \ \$56.26 \\ \times \ 9 \\ \hline \end{array}$$

**\$506.34**

$$\begin{array}{r} 4. \ \$49.50 \\ \times \ 6 \\ \hline \end{array}$$

**\$297.00**

$$5. \ \$0.79 \times 8$$

**\$6.32**

$$6. \ \$114.65 \times 6$$

**\$687.90**

$$7. \ \$4.37 \times 9$$

**\$39.33**

$$8. \ \$237.92 \times 5$$

**\$1,189.60**

9. Andy bought 7 videos at the mall. Each video cost \$14.95. How much money did he spend?

**\$104.65**

10. **Mental Math** Find  $6 \times \$300.00$ .

**\$1,800.00**

Use the table at the right for Exercises 11–13.

11. What would the total cost be to make 3 of each item?

**\$28.95**

Item	Cost to Make	Selling Price
Hat	\$2.75	\$4.55
T-Shirt	\$6.32	\$14.10
Button	\$0.58	\$0.95

12. How much would you collect altogether if you sold 4 hats, 2 T-shirts, and 5 buttons?

**\$51.15**

13. Marie made \$18 for making and then selling 10 of one of the items shown in the table. Which item was she selling?

**hats**

**Test Prep** Choose the correct letter for each answer.

14. Joe bought 6 plates for \$5.99 each and 4 glasses for \$6.50 each. How much did he spend in all?

**A** \$65.50

**(B)** \$61.94

**C** \$55.95

**D** \$59.90

15. It costs you \$3.75 to make a bird house. How much money do you make if you sell 5 bird houses for \$6.00 each?

**F** \$30.00

**G** \$18.75

**(H)** \$11.25

**J** \$10.25

Name \_\_\_\_\_

## Mental Math: Special Products

Use mental math to find each product.

- |                         |                         |
|-------------------------|-------------------------|
| 1. $36 \times 4$ _____  | 2. $4 \times 18$ _____  |
| 3. $22 \times 8$ _____  | 4. $23 \times 4$ _____  |
| 5. $8 \times 42$ _____  | 6. $59 \times 7$ _____  |
| 7. $74 \times 3$ _____  | 8. $49 \times 4$ _____  |
| 9. $68 \times 4$ _____  | 10. $44 \times 6$ _____ |
| 11. $55 \times 8$ _____ | 12. $61 \times 6$ _____ |
| 13. $43 \times 6$ _____ | 14. $4 \times 36$ _____ |
| 15. $54 \times 8$ _____ | 16. $22 \times 7$ _____ |
| 17. $6 \times 49$ _____ | 18. $4 \times 49$ _____ |
| 19. $45 \times 4$ _____ | 20. $88 \times 9$ _____ |
| 21. $4 \times 34$ _____ | 22. $6 \times 27$ _____ |
| 23. $49 \times 4$ _____ | 24. $8 \times 55$ _____ |
| 25. $43 \times 5$ _____ | 26. $21 \times 5$ _____ |
| 27. $8 \times 88$ _____ | 28. $14 \times 9$ _____ |

29. Find the product of 61 and 7 mentally. \_\_\_\_\_

30. Find the product of 78 and 3 mentally. \_\_\_\_\_

31. Multiply 5 and 89 mentally. \_\_\_\_\_

32. Describe how you would find the product of 65 and 5 mentally.

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## Answer Key

### Mental Math: Special Products

Use mental math to find each product.

- |                              |                              |
|------------------------------|------------------------------|
| 1. $36 \times 4$ <u>144</u>  | 2. $4 \times 18$ <u>72</u>   |
| 3. $22 \times 8$ <u>176</u>  | 4. $23 \times 4$ <u>92</u>   |
| 5. $8 \times 42$ <u>336</u>  | 6. $59 \times 7$ <u>413</u>  |
| 7. $74 \times 3$ <u>222</u>  | 8. $49 \times 4$ <u>196</u>  |
| 9. $68 \times 4$ <u>272</u>  | 10. $44 \times 6$ <u>264</u> |
| 11. $55 \times 8$ <u>440</u> | 12. $61 \times 6$ <u>366</u> |
| 13. $43 \times 6$ <u>258</u> | 14. $4 \times 36$ <u>144</u> |
| 15. $54 \times 8$ <u>432</u> | 16. $22 \times 7$ <u>154</u> |
| 17. $6 \times 49$ <u>294</u> | 18. $4 \times 49$ <u>196</u> |
| 19. $45 \times 4$ <u>180</u> | 20. $88 \times 9$ <u>792</u> |
| 21. $4 \times 34$ <u>136</u> | 22. $6 \times 27$ <u>162</u> |
| 23. $49 \times 4$ <u>196</u> | 24. $8 \times 55$ <u>440</u> |
| 25. $43 \times 5$ <u>215</u> | 26. $21 \times 5$ <u>105</u> |
| 27. $8 \times 88$ <u>704</u> | 28. $14 \times 9$ <u>126</u> |

29. Find the product of 61 and 7 mentally. 427

30. Find the product of 78 and 3 mentally. 234

31. Multiply 5 and 89 mentally. 445

32. Describe how you would find the product of 65 and 5 mentally.

Possible answer: Think of 65 as  $60 + 5$ .  $60 \times 5 = 300$ ,  
 $5 \times 5 = 25$ ,  $300 + 25 = 325$

Name \_\_\_\_\_

## Multiplying 3 Factors

Find each product.

1.  $(3 \times 8) \times 5 =$  \_\_\_\_\_

2.  $7 \times (4 \times 8) =$  \_\_\_\_\_

3.  $(14 \times 3) \times 6 =$  \_\_\_\_\_

4.  $6 \times (3 \times 6) =$  \_\_\_\_\_

5.  $7 \times (28 \times 3) =$  \_\_\_\_\_

6.  $(15 \times 2) \times 4 =$  \_\_\_\_\_

7.  $5 \times (7 \times 7) =$  \_\_\_\_\_

8.  $3 \times (81 \times 3) =$  \_\_\_\_\_

9.  $(25 \times 5) \times 4 =$  \_\_\_\_\_

10.  $(2 \times 6) \times 9 =$  \_\_\_\_\_

Find each product.

11.  $16 \times 4 \times 7$

12.  $9 \times 7 \times 13$

13.  $5 \times 8 \times 7$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

14.  $4 \times 12 \times 3$

15.  $24 \times 2 \times 5$

16.  $6 \times 7 \times 8$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

17. Write  $9 \times 4 \times 3$  in three different ways.

\_\_\_\_\_

18. Write  $12 \times 6 \times 8$  in three different ways.

\_\_\_\_\_

19. Explain how you would find the product of  $(4 \times 5) \times 0 \times (6 \times 2) \times 8 \times 3$ .

\_\_\_\_\_

20. Explain how you would find the product of  $15 \times 5 \times 20$ .

\_\_\_\_\_

21. Write three factors. Find their product.

\_\_\_\_\_

## Answer Key

### Multiplying 3 Factors

Find each product.

1.  $(3 \times 8) \times 5 = \underline{120}$

2.  $7 \times (4 \times 8) = \underline{224}$

3.  $(14 \times 3) \times 6 = \underline{252}$

4.  $6 \times (3 \times 6) = \underline{108}$

5.  $7 \times (28 \times 3) = \underline{588}$

6.  $(15 \times 2) \times 4 = \underline{120}$

7.  $5 \times (7 \times 7) = \underline{245}$

8.  $3 \times (81 \times 3) = \underline{729}$

9.  $(25 \times 5) \times 4 = \underline{500}$

10.  $(2 \times 6) \times 9 = \underline{108}$

Find each product.

11.  $16 \times 4 \times 7$   
 $\underline{448}$

12.  $9 \times 7 \times 13$   
 $\underline{819}$

13.  $5 \times 8 \times 7$   
 $\underline{280}$

14.  $4 \times 12 \times 3$   
 $\underline{144}$

15.  $24 \times 2 \times 5$   
 $\underline{240}$

16.  $6 \times 7 \times 8$   
 $\underline{336}$

17. Write  $9 \times 4 \times 3$  in three different ways.

Possible answers:  $(9 \times 4) \times 3$ , or  $(3 \times 4) \times 9$ , or  $(9 \times 3) \times 4$

18. Write  $12 \times 6 \times 8$  in three different ways.

$8 \times (12 \times 6)$ , or  $12 \times (8 \times 6)$ , or  $(8 \times 12) \times 6$

19. Explain how you would find the product of  $(4 \times 5) \times 0 \times (6 \times 2) \times 8 \times 3$ .

When one of the factors is zero, the product is zero.

20. Explain how you would find the product of  $15 \times 5 \times 20$ .

$15 \times (5 \times 20) = 15 \times 100 = 1,500$

21. Write three factors. Find their product.

Answers will vary.

## Math Hints and Reminders: Multiplying by 2-Digit Factors

### Exploring Multiplication Patterns

Once you have a basic multiplication fact down, like  $6 \times 6 = 36$ , multiplying numbers that end in zero (multiples of 10) by tens, hundreds, and thousands is just a matter of tacking on the right number of zeros! Take a look at the pattern:

$60 \times 6 = 360$
$60 \times 60 = 3,600$
$60 \times 600 = 36,000$
$60 \times 6,000 = 360,000$

### Estimating Products

How can you tell when to estimate? Look for the word “about” in the question. To solve estimation problems with two 2-digit factors, you first need to “round” both factors to numbers that are easy to work with – such as a number that ends in zero. Then use your basic multiplication facts. (See “estimating products” on the previous hints sheet.)

### Multiplying by Multiples of 10

Remember, you can use basic multiplication facts (such as  $6 \times 2 = 12$ ) and what you know about zero (any number times 0 is 0) to help you multiply 2-digit numbers.

Find $40 \times 38$	
Multiply 38 by the digit in the ones place: $38 \times 0 = 0$ .	Multiply 38 by the digit in the tens place: $38 \times 4 = 152$ .
$\begin{array}{r} 38 \\ \times 40 \\ \hline 0 \end{array}$	$\begin{array}{r} 38 \\ \times 40 \\ \hline 1,520 \end{array}$

### Multiplying with 2-Digit Factors

There are a couple of ways that you can multiply two 2-digit numbers, but you should work toward “multiplying in 2 steps” because it’s quicker. If you’re having trouble with the 2-step method, try writing the zero in the ones place before you multiply the tens.

Multiplying in 2 Steps		Multiplying in 4 Steps
Find $25 \times 36$		Find $46 \times 29$
Step 1: Multiply by ones.	Step 2: Multiply by tens.	
$\begin{array}{r} 3 \\ 25 \\ \times 36 \\ \hline 150 \end{array} \rightarrow 25 \times 6$	$\begin{array}{r} 1 \\ 3 \\ 25 \\ \times 36 \\ \hline 150 \\ 750 \end{array} \rightarrow 25 \times 30 \dots \text{Add}$	$\begin{array}{r} 46 \\ \times 29 \\ \hline 54 \\ 360 \\ 120 \\ 800 \\ \hline 1,334 \end{array}$
		$\begin{array}{ll} 54 & \rightarrow 1. \text{ Multiply } 9 \times 6 \\ 360 & \rightarrow 2. \text{ Multiply } 9 \times 40 \\ 120 & \rightarrow 3. \text{ Multiply } 20 \times 6 \\ 800 & \rightarrow 4. \text{ Multiply } 20 \times 40 \dots \text{Add} \end{array}$

**Estimating Greater Products**

See "Estimating Products" on previous page.

**Choosing a Calculation Method**

There are lots of ways to find the answer to a multiplication problem, but depending on the situation, some are better than others! Here are two ways to go about it:

- Numbers that end in 0 (multiples of 10) are easy to multiply in your head. Take  $600 \times 500$ . Just multiply the basic fact ( $6 \times 5 = 30$ ). Count the number of zeros in the factors (4) and add them on to the answer (300,000).
- For numbers that require a lot of regrouping, a pencil and paper or a calculator might be the best bet. If you're using a calculator, remember to "punch" the problem twice to make sure your answer is correct.

**Multiplying Money**

See the previous "Math Hints" sheet.

Name \_\_\_\_\_

## Mental Math: Multiplying Multiples of Ten

Use a basic fact you know and a pattern of zeros to multiply mentally.

$$70 \times 500$$

Start with basic facts.

$$7 \times 5 = 35$$

$$70 \times 50 = 3,500$$

$$70 \times 500 = 35,000$$

Remember that the number of zeros in both factors equals the number of zeros in the product.

Find the products using mental math.

1.  $4 \times 2 =$  \_\_\_\_\_

$4 \times 20 =$  \_\_\_\_\_

$400 \times 200 =$  \_\_\_\_\_

2.  $5 \times 3 =$  \_\_\_\_\_

$5 \times 30 =$  \_\_\_\_\_

$500 \times 300 =$  \_\_\_\_\_

3.  $6 \times 1 =$  \_\_\_\_\_

$6 \times 10 =$  \_\_\_\_\_

$6 \times 100 =$  \_\_\_\_\_

4.  $7 \times 3 =$  \_\_\_\_\_

$7 \times 30 =$  \_\_\_\_\_

$7 \times 300 =$  \_\_\_\_\_

5.  $400 \times 600 =$  \_\_\_\_\_

6.  $7,000 \times 2,000 =$  \_\_\_\_\_

7.  $50 \times 400 =$  \_\_\_\_\_

8.  $900 \times 60 =$  \_\_\_\_\_

Use the table to solve Exercises 9–10.

9. How many whales would there be in 60 pods? \_\_\_\_\_

10. How many penguins would there be in 80 colonies? \_\_\_\_\_

Animal Groups	
Name	Number in Group
Pod of whales	20
Mob of kangaroos	25
Colony of penguins	300

# Answer Key

## Mental Math: Multiplying Multiples of Ten

Use a basic fact you know and a pattern of zeros to multiply mentally.

$$70 \times 500$$

Start with basic facts.

$$7 \times 5 = 35$$

$$70 \times 50 = 3,500$$

$$70 \times 500 = 35,000$$

Remember that the number of zeros in both factors equals the number of zeros in the product.

Find the products using mental math.

1.  $4 \times 2 = \underline{8}$   
 $4 \times 20 = \underline{80}$   
 $400 \times 200 = \underline{80,000}$

2.  $5 \times 3 = \underline{15}$   
 $5 \times 30 = \underline{150}$   
 $500 \times 300 = \underline{150,000}$

3.  $6 \times 1 = \underline{6}$   
 $6 \times 10 = \underline{60}$   
 $6 \times 100 = \underline{600}$

4.  $7 \times 3 = \underline{21}$   
 $7 \times 30 = \underline{210}$   
 $7 \times 300 = \underline{2,100}$

5.  $400 \times 600 = \underline{240,000}$

6.  $7,000 \times 2,000 = \underline{14,000,000}$

7.  $50 \times 400 = \underline{20,000}$

8.  $900 \times 60 = \underline{54,000}$

Use the table to solve Exercises 9–10.

9. How many whales would there be in 60 pods?  $\underline{1,200}$

10. How many penguins would there be in 80 colonies?  $\underline{24,000}$

Animal Groups	
Name	Number in Group
Pod of whales	20
Mob of kangaroos	25
Colony of penguins	300

Name \_\_\_\_\_

## Estimating Products

Round and estimate the products mentally.

1. 
$$\begin{array}{r} 25 \\ \times 3 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 39 \\ \times 4 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 62 \\ \times 5 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 311 \\ \times 6 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} \$1.75 \\ \times 4 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 603 \\ \times 22 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} \$4.93 \\ \times 12 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 408 \\ \times 62 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 1,218 \\ \times 78 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 2,579 \\ \times 78 \\ \hline \end{array}$$

11.  $16 \times 189 =$  \_\_\_\_\_

12.  $31 \times 137 =$  \_\_\_\_\_

13.  $27 \times \$19.15 =$  \_\_\_\_\_

14.  $350 \times 17 =$  \_\_\_\_\_

15.  $261 \times 41 =$  \_\_\_\_\_

16.  $2,311 \times 14 =$  \_\_\_\_\_

17. **Algebra** When Jessica computed  $47 \times 18$ , she got an answer of 8,460. Show how you would estimate to check if her answer is reasonable.

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**Test Prep** Circle the correct letter for the answer.

18. If Rosemary's mother spends about \$20.00 on lunch each week, what is a reasonable estimate of the amount of money she spends on lunch each month?

**A** \$40.00

**C** \$140.00

**B** \$80.00

**D** \$180.00

19. In one day, 1,265 people visited the Washington Monument. Estimate the number of visitors to the Washington Monument in 28 days.

**F** 39,000

**H** 41,030

**G** 26,000

**J** 30,000



# Answer Key

## Estimating Products

Round and estimate the products mentally.

$$\begin{array}{r} 1. \quad 25 \\ \times 3 \\ \hline 90 \end{array}$$

$$\begin{array}{r} 2. \quad 39 \\ \times 4 \\ \hline 160 \end{array}$$

$$\begin{array}{r} 3. \quad 62 \\ \times 5 \\ \hline 300 \end{array}$$

$$\begin{array}{r} 4. \quad 311 \\ \times 6 \\ \hline 1,800 \end{array}$$

$$\begin{array}{r} 5. \quad \$1.75 \\ \times 4 \\ \hline \$8.00 \end{array}$$

$$\begin{array}{r} 6. \quad 603 \\ \times 22 \\ \hline 12,000 \end{array}$$

$$\begin{array}{r} 7. \quad \$4.93 \\ \times 12 \\ \hline \$50.00 \end{array}$$

$$\begin{array}{r} 8. \quad 408 \\ \times 62 \\ \hline 24,000 \end{array}$$

$$\begin{array}{r} 9. \quad 1,218 \\ \times 78 \\ \hline 80,000 \end{array}$$

$$\begin{array}{r} 10. \quad 2,579 \\ \times 78 \\ \hline 240,000 \end{array}$$

$$11. \quad 16 \times 189 = \underline{4,000}$$

$$12. \quad 31 \times 137 = \underline{3,000}$$

$$13. \quad 27 \times \$19.15 = \underline{\$600.00}$$

$$14. \quad 350 \times 17 = \underline{8,000}$$

$$15. \quad 261 \times 41 = \underline{12,000}$$

$$16. \quad 2,311 \times 14 = \underline{20,000}$$

- 17. Algebra** When Jessica computed  $47 \times 18$ , she got an answer of 8,460. Show how you would estimate to check if her answer is reasonable.

**Multiply  $50 \times 20 = 1,000$  to estimate. So, 8,460 is not a reasonable answer.**

**Test Prep** Circle the correct letter for the answer.

- 18.** If Rosemary's mother spends about \$20.00 on lunch each week, what is a reasonable estimate of the amount of money she spends on lunch each month?

**A** \$40.00

**C** \$140.00

**(B)** \$80.00

**D** \$180.00

- 19.** In one day, 1,265 people visited the Washington Monument. Estimate the number of visitors to the Washington Monument in 28 days.

**F** 39,000

**H** 41,030

**G** 26,000

**(J)** 30,000

Name \_\_\_\_\_

## Multiplying by a Multiple of Ten

1. 
$$\begin{array}{r} 15 \\ \times 20 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 46 \\ \times 50 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 272 \\ \times 60 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 1,507 \\ \times 80 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 3,317 \\ \times 30 \\ \hline \end{array}$$

6.  $20 \times 96$

\_\_\_\_\_

7.  $70 \times 6,507$

\_\_\_\_\_

8.  $45 \times 50$

\_\_\_\_\_

9.  $95 \times 40$

\_\_\_\_\_

10.  $30 \times 445$

\_\_\_\_\_

11.  $633 \times 90$

\_\_\_\_\_

12.  $82 \times 60$

\_\_\_\_\_

13.  $2,270 \times 20$

\_\_\_\_\_

14. **Mental Math** Find  $98 \times 30$ . \_\_\_\_\_

15. **Algebra** Find the value of  $70x + 84$  when  $x$  is 65. \_\_\_\_\_

16. If 25 children flew 23 kites on 27 out of 365 days, on how many days that year did children not fly kites? \_\_\_\_\_

17. **Math Reasoning** What happens to any product if both factors are cut in half?  
\_\_\_\_\_

**Test Prep** Circle the correct letter for each answer.

18. New World monkeys, the kind found in the rain forest in South America, have 36 teeth. Most monkeys live in groups of 20. What is the total number of teeth one group of 20 New World monkeys has?

**A** 400

**B** 720

**C** 760

**D** 1,440

19. Old World monkeys have 32 teeth. What is the total number of teeth one 20-monkey group has?

**F** 640

**G** 460

**H** 520

**J** 1,280

# Answer Key

## Multiplying by a Multiple of Ten

1. 
$$\begin{array}{r} 15 \\ \times 20 \\ \hline 300 \end{array}$$

2. 
$$\begin{array}{r} 46 \\ \times 50 \\ \hline 2,300 \end{array}$$

3. 
$$\begin{array}{r} 272 \\ \times 60 \\ \hline 16,320 \end{array}$$

4. 
$$\begin{array}{r} 1,507 \\ \times 80 \\ \hline 120,560 \end{array}$$

5. 
$$\begin{array}{r} 3,317 \\ \times 30 \\ \hline 99,510 \end{array}$$

6. 
$$\begin{array}{r} 20 \times 96 \\ \hline 1,920 \end{array}$$

7. 
$$\begin{array}{r} 70 \times 6,507 \\ \hline 455,490 \end{array}$$

8. 
$$\begin{array}{r} 45 \times 50 \\ \hline 2,250 \end{array}$$

9. 
$$\begin{array}{r} 95 \times 40 \\ \hline 3,800 \end{array}$$

10. 
$$\begin{array}{r} 30 \times 445 \\ \hline 13,350 \end{array}$$

11. 
$$\begin{array}{r} 633 \times 90 \\ \hline 56,970 \end{array}$$

12. 
$$\begin{array}{r} 82 \times 60 \\ \hline 4,920 \end{array}$$

13. 
$$\begin{array}{r} 2,270 \times 20 \\ \hline 45,400 \end{array}$$

14. **Mental Math** Find  $98 \times 30$ . 2,940

15. **Algebra** Find the value of  $70x + 84$  when  $x$  is 65. 4,634

16. If 25 children flew 23 kites on 27 out of 365 days, on how many days that year did children not fly kites? 338 days

17. **Math Reasoning** What happens to any product if both factors are cut in half?  
The product is 4 times smaller.

**Test Prep** Circle the correct letter for each answer.

18. New World monkeys, the kind found in the rain forest in South America, have 36 teeth. Most monkeys live in groups of 20. What is the total number of teeth one group of 20 New World monkeys has?

A 400

**B** 720

C 760

D 1,440

19. Old World monkeys have 32 teeth. What is the total number of teeth one 20-monkey group has?

**F** 640

G 460

H 520

J 1,280

Name \_\_\_\_\_

## Multiplying by Two-Digit Numbers

1. 
$$\begin{array}{r} 54 \\ \times 14 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 63 \\ \times 35 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 77 \\ \times 36 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} \$0.57 \\ \times 51 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 82 \\ \times 44 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} \$0.70 \\ \times 45 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 49 \\ \times 98 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 96 \\ \times 23 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 21 \\ \times 97 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 94 \\ \times 96 \\ \hline \end{array}$$

11.  $31 \times 56$

12.  $\$0.65 \times 16$

13.  $72 \times 27$

14.  $75 \times \$0.99$

\_\_\_\_\_

15. To raise money for the band trip, 13 students showed up to help at the Benefit the Band Car Wash. They charged \$12 for a car wash and by the end of the day had washed a total of 68 cars. How much money did they earn?

\_\_\_\_\_

16. **Algebra** Find the value of  $56 \times n$  when  $n = 82$ . \_\_\_\_\_

17. **Math Reasoning** Find  $47 \times 45$  and explain your answer.

**Test Prep** Circle the correct letter for each answer.

18. A fourth-grade class made its own cartoon. Each student made 8 drawings every day for 3 days. There were 27 students in the class. How many drawings did they make?

**A** 216

**B** 648

**C** 81

**D** 612

19. Your class decides to make 2 cartoons that are each 9 seconds long. Each second requires 24 drawings. How many drawings will your class have to make?

**F** 324

**G** 432

**H** 216

**J** 612

# Answer Key

## Multiplying by Two-Digit Numbers

$$\begin{array}{r} 1. \quad 54 \\ \times 14 \\ \hline 756 \end{array}$$

$$\begin{array}{r} 2. \quad 63 \\ \times 35 \\ \hline 2,205 \end{array}$$

$$\begin{array}{r} 3. \quad 77 \\ \times 36 \\ \hline 2,772 \end{array}$$

$$\begin{array}{r} 4. \quad \$0.57 \\ \times 51 \\ \hline \$29.07 \end{array}$$

$$\begin{array}{r} 5. \quad 82 \\ \times 44 \\ \hline 3,608 \end{array}$$

$$\begin{array}{r} 6. \quad \$0.70 \\ \times 45 \\ \hline \$31.50 \end{array}$$

$$\begin{array}{r} 7. \quad 49 \\ \times 98 \\ \hline 4,802 \end{array}$$

$$\begin{array}{r} 8. \quad 96 \\ \times 23 \\ \hline 2,208 \end{array}$$

$$\begin{array}{r} 9. \quad 21 \\ \times 97 \\ \hline 2,037 \end{array}$$

$$\begin{array}{r} 10. \quad 94 \\ \times 96 \\ \hline 9,024 \end{array}$$

$$11. \quad 31 \times 56 \\ \underline{1,736}$$

$$12. \quad \$0.65 \times 16 \\ \underline{\$10.40}$$

$$13. \quad 72 \times 27 \\ \underline{1,944}$$

$$14. \quad 75 \times \$0.99 \\ \underline{\$74.25}$$

15. To raise money for the band trip, 13 students showed up to help at the Benefit the Band Car Wash. They charged \$12 for a car wash and by the end of the day had washed a total of 68 cars. How much money did they earn?

**\$816**

16. Algebra Find the value of  $56 \times n$  when  $n = 82$ . **4,592**

17. Math Reasoning Find  $47 \times 45$  and explain your answer.

$$47 \times 45 = 2,115$$

$$\begin{aligned} 45 \times 47 &= 45 \times (40 + 7) \\ &= (45 \times 40) + (45 \times 7) \\ &= 1,800 + 315 \\ &= 2,115 \end{aligned}$$

**Test Prep** Circle the correct letter for each answer.

18. A fourth-grade class made its own cartoon. Each student made 8 drawings every day for 3 days. There were 27 students in the class. How many drawings did they make?

**A** 216

**(B)** 648

**C** 81

**D** 612

19. Your class decides to make 2 cartoons that are each 9 seconds long. Each second requires 24 drawings. How many drawings will your class have to make?

**F** 324

**(G)** 432

**H** 216

**J** 612

Name \_\_\_\_\_

## Estimating Greater Products

Estimate each product.

1.  $595 \times 41 =$  \_\_\_\_\_

2.  $395 \times 68 =$  \_\_\_\_\_

3.  $215 \times 38 =$  \_\_\_\_\_

4.  $632 \times 63 =$  \_\_\_\_\_

5.  $489 \times 53 =$  \_\_\_\_\_

6.  $553 \times 47 =$  \_\_\_\_\_

7.  $717 \times 38 =$  \_\_\_\_\_

8.  $837 \times 91 =$  \_\_\_\_\_

9. 
$$\begin{array}{r} 672 \\ \times 21 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 513 \\ \times 35 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 491 \\ \times 78 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} 323 \\ \times 46 \\ \hline \end{array}$$

13. 
$$\begin{array}{r} 288 \\ \times 68 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} 821 \\ \times 59 \\ \hline \end{array}$$

15. 
$$\begin{array}{r} 428 \\ \times 27 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} 351 \\ \times 76 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} 591 \\ \times 42 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 120 \\ \times 89 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} 276 \\ \times 68 \\ \hline \end{array}$$

20. 
$$\begin{array}{r} 364 \\ \times 89 \\ \hline \end{array}$$

21. 
$$\begin{array}{r} 375 \\ \times 64 \\ \hline \end{array}$$

22. 
$$\begin{array}{r} 928 \\ \times 85 \\ \hline \end{array}$$

23. 
$$\begin{array}{r} 672 \\ \times 33 \\ \hline \end{array}$$

24. 
$$\begin{array}{r} 794 \\ \times 39 \\ \hline \end{array}$$

25. 
$$\begin{array}{r} 620 \\ \times 83 \\ \hline \end{array}$$

26. 
$$\begin{array}{r} 575 \\ \times 71 \\ \hline \end{array}$$

27. 
$$\begin{array}{r} 931 \\ \times 84 \\ \hline \end{array}$$

28. 
$$\begin{array}{r} 506 \\ \times 49 \\ \hline \end{array}$$

29. Estimate the product of 549 and 68. \_\_\_\_\_

30. Estimate the product of 978 and 61. \_\_\_\_\_

31. Write two different sets of factors that you estimate would have a product of about 40,000.

\_\_\_\_\_  
\_\_\_\_\_

## Answer Key

### Estimating Greater Products

Estimate each product.

1.  $595 \times 41 =$  24,000

3.  $215 \times 38 =$  8,000

5.  $489 \times 53 =$  25,000

7.  $717 \times 38 =$  28,000

$$\begin{array}{r} 672 \\ \times 21 \\ \hline 14,000 \end{array}$$

$$\begin{array}{r} 513 \\ \times 35 \\ \hline 20,000 \end{array}$$

2.  $395 \times 68 =$  28,000

4.  $632 \times 63 =$  36,000

6.  $553 \times 47 =$  30,000

8.  $837 \times 91 =$  72,000

$$\begin{array}{r} 491 \\ \times 78 \\ \hline 40,000 \end{array}$$

$$\begin{array}{r} 323 \\ \times 46 \\ \hline 15,000 \end{array}$$

$$\begin{array}{r} 288 \\ \times 68 \\ \hline 21,000 \end{array}$$

$$\begin{array}{r} 821 \\ \times 59 \\ \hline 48,000 \end{array}$$

$$\begin{array}{r} 428 \\ \times 27 \\ \hline 12,000 \end{array}$$

$$\begin{array}{r} 351 \\ \times 76 \\ \hline 32,000 \end{array}$$

$$\begin{array}{r} 591 \\ \times 42 \\ \hline 24,000 \end{array}$$

$$\begin{array}{r} 120 \\ \times 89 \\ \hline 9,000 \end{array}$$

$$\begin{array}{r} 276 \\ \times 68 \\ \hline 21,000 \end{array}$$

$$\begin{array}{r} 364 \\ \times 89 \\ \hline 36,000 \end{array}$$

$$\begin{array}{r} 375 \\ \times 64 \\ \hline 24,000 \end{array}$$

$$\begin{array}{r} 928 \\ \times 85 \\ \hline 81,000 \end{array}$$

$$\begin{array}{r} 672 \\ \times 33 \\ \hline 21,000 \end{array}$$

$$\begin{array}{r} 794 \\ \times 39 \\ \hline 32,000 \end{array}$$

$$\begin{array}{r} 620 \\ \times 83 \\ \hline 48,000 \end{array}$$

$$\begin{array}{r} 575 \\ \times 71 \\ \hline 42,000 \end{array}$$

$$\begin{array}{r} 931 \\ \times 84 \\ \hline 72,000 \end{array}$$

$$\begin{array}{r} 506 \\ \times 49 \\ \hline 25,000 \end{array}$$

29. Estimate the product of 549 and 68. 35,000

30. Estimate the product of 978 and 61. 60,000

31. Write two different sets of factors that you estimate would have a product of about 40,000.

Possible answer: Any factors that round to  $50 \times 800$  or

$80 \times 500$ , such as  $49 \times 788$  or  $77 \times 465$ .

Name \_\_\_\_\_

## Choosing a Calculation Method

Find each product. Estimate to check.

1. 
$$\begin{array}{r} 113 \\ \times 48 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 425 \\ \times 15 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 6,000 \\ \times 70 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 3,050 \\ \times 31 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 575 \\ \times 32 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 214 \\ \times 21 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 5,000 \\ \times 70 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 2,060 \\ \times 30 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 2,164 \\ \times 13 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 4,625 \\ \times 14 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 4,633 \\ \times 15 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} 2,037 \\ \times 38 \\ \hline \end{array}$$

13.  $15 \times 2,160 =$  \_\_\_\_\_

14.  $14 \times 2,322 =$  \_\_\_\_\_

15.  $2,124 \times 37 =$  \_\_\_\_\_

16.  $777 \times 14 =$  \_\_\_\_\_

17.  $3,104 \times 33 =$  \_\_\_\_\_

18.  $305 \times 305 =$  \_\_\_\_\_

19. Find the product of 263 and 15. \_\_\_\_\_

20. Find the product of 4,269 and 12. \_\_\_\_\_

21. Find the product of 1,321 and 11. \_\_\_\_\_

22. How would you use mental math to find the product of 280 and 100?

\_\_\_\_\_

23. How many digits are in the product of 676 and 78?

\_\_\_\_\_



Name \_\_\_\_\_

## Multiplying Money

Multiply. Estimate to check.

1.  $12 \times \$1.55 =$  \_\_\_\_\_

2.  $23 \times \$3.39 =$  \_\_\_\_\_

3.  $11 \times \$5.91 =$  \_\_\_\_\_

4.  $21 \times \$6.99 =$  \_\_\_\_\_

5.  $15 \times \$2.67 =$  \_\_\_\_\_

6.  $10 \times \$16.02 =$  \_\_\_\_\_

7. 
$$\begin{array}{r} \$16.35 \\ \times 14 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} \$40.31 \\ \times 18 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} \$17.06 \\ \times 23 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} \$19.86 \\ \times 19 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} \$5.45 \\ \times 12 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} \$8.36 \\ \times 16 \\ \hline \end{array}$$

13. 
$$\begin{array}{r} \$8.05 \\ \times 33 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} \$9.15 \\ \times 56 \\ \hline \end{array}$$

15. 
$$\begin{array}{r} \$6.45 \\ \times 45 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} \$16.89 \\ \times 28 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} \$12.75 \\ \times 41 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} \$17.72 \\ \times 27 \\ \hline \end{array}$$

19. Find the product of \$14.89 and 14. \_\_\_\_\_

20. Multiply \$4.37 by 25. \_\_\_\_\_

21. Could you buy 13 posters at \$7.50 each with \$100?  
Explain.

\_\_\_\_\_

22. Could you buy 25 posters at \$7.50 each with \$170?  
Explain.

\_\_\_\_\_

## Answer Key

### Multiplying Money

Multiply. Estimate to check.

1.  $12 \times \$1.55 =$  **\$18.60**

2.  $23 \times \$3.39 =$  **\$77.97**

3.  $11 \times \$5.91 =$  **\$65.01**

4.  $21 \times \$6.99 =$  **\$146.79**

5.  $15 \times \$2.67 =$  **\$40.05**

6.  $10 \times \$16.02 =$  **\$160.20**

7. 
$$\begin{array}{r} \$16.35 \\ \times 14 \\ \hline \end{array}$$
**\$228.90**

8. 
$$\begin{array}{r} \$40.31 \\ \times 18 \\ \hline \end{array}$$
**\$725.58**

9. 
$$\begin{array}{r} \$17.06 \\ \times 23 \\ \hline \end{array}$$
**\$392.38**

10. 
$$\begin{array}{r} \$19.86 \\ \times 19 \\ \hline \end{array}$$
**\$377.34**

11. 
$$\begin{array}{r} \$5.45 \\ \times 12 \\ \hline \end{array}$$
**\$65.40**

12. 
$$\begin{array}{r} \$8.36 \\ \times 16 \\ \hline \end{array}$$
**\$133.76**

13. 
$$\begin{array}{r} \$8.05 \\ \times 33 \\ \hline \end{array}$$
**\$265.65**

14. 
$$\begin{array}{r} \$9.15 \\ \times 56 \\ \hline \end{array}$$
**\$512.40**

15. 
$$\begin{array}{r} \$6.45 \\ \times 45 \\ \hline \end{array}$$
**\$290.25**

16. 
$$\begin{array}{r} \$16.89 \\ \times 28 \\ \hline \end{array}$$
**\$472.92**

17. 
$$\begin{array}{r} \$12.75 \\ \times 41 \\ \hline \end{array}$$
**\$522.75**

18. 
$$\begin{array}{r} \$17.72 \\ \times 27 \\ \hline \end{array}$$
**\$478.44**

19. Find the product of \$14.89 and 14. **\$208.46**

20. Multiply \$4.37 by 25. **\$109.25**

21. Could you buy 13 posters at \$7.50 each with \$100?  
Explain.

**Yes.  $13 \times \$7.50 = \$97.50$ .**

22. Could you buy 25 posters at \$7.50 each with \$170?  
Explain.

**No.  $25 \times \$7.50 = \$187.50$ .**

## Answer Key

### Choosing a Calculation Method

Find each product. Estimate to check.

1. 
$$\begin{array}{r} 113 \\ \times 48 \\ \hline 5,424 \end{array}$$

2. 
$$\begin{array}{r} 425 \\ \times 15 \\ \hline 6,375 \end{array}$$

3. 
$$\begin{array}{r} 6,000 \\ \times 70 \\ \hline 420,000 \end{array}$$

4. 
$$\begin{array}{r} 3,050 \\ \times 31 \\ \hline 94,550 \end{array}$$

5. 
$$\begin{array}{r} 575 \\ \times 32 \\ \hline 18,400 \end{array}$$

6. 
$$\begin{array}{r} 214 \\ \times 21 \\ \hline 4,494 \end{array}$$

7. 
$$\begin{array}{r} 5,000 \\ \times 70 \\ \hline 350,000 \end{array}$$

8. 
$$\begin{array}{r} 2,060 \\ \times 30 \\ \hline 61,800 \end{array}$$

9. 
$$\begin{array}{r} 2,164 \\ \times 13 \\ \hline 28,132 \end{array}$$

10. 
$$\begin{array}{r} 4,625 \\ \times 14 \\ \hline 64,750 \end{array}$$

11. 
$$\begin{array}{r} 4,633 \\ \times 15 \\ \hline 69,495 \end{array}$$

12. 
$$\begin{array}{r} 2,037 \\ \times 38 \\ \hline 77,406 \end{array}$$

13.  $15 \times 2,160 = \underline{32,400}$

14.  $14 \times 2,322 = \underline{32,508}$

15.  $2,124 \times 37 = \underline{78,588}$

16.  $777 \times 14 = \underline{10,878}$

17.  $3,104 \times 33 = \underline{102,432}$

18.  $305 \times 305 = \underline{93,025}$

19. Find the product of 263 and 15.  $\underline{3,945}$

20. Find the product of 4,269 and 12.  $\underline{51,228}$

21. Find the product of 1,321 and 11.  $\underline{14,531}$

22. How would you use mental math to find the product of 280 and 100?

**Multiply 28 times 1 and add 3 zeros.**

23. How many digits are in the product of 676 and 78?

**5 digits**