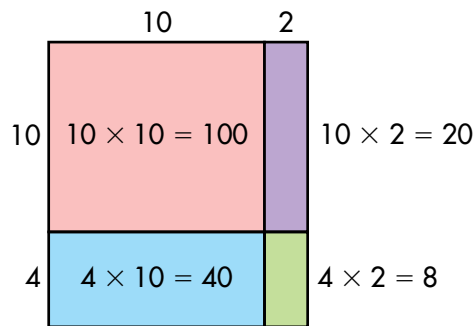


# Homework & Practice 4-7

## Use Partial Products to Multiply by 2-Digit Numbers

### Another Look!

Golf balls come in a box of 12.  
How many golf balls are in 14 boxes?



$$\begin{array}{r}
 12 \\
 \times 14 \\
 \hline
 8 \quad 4 \times 2 = 8 \\
 40 \quad 4 \times 10 = 40 \\
 20 \quad 10 \times 2 = 20 \\
 + 100 \quad 10 \times 10 = 100 \\
 \hline
 168
 \end{array}$$

For 1–8, find all the partial products. Then add to find the final product. Draw area models as needed.

1. 
$$\begin{array}{r}
 16 \\
 \times 15 \\
 \hline
 \square \square \\
 \square \square \\
 \square \square \\
 + \square \square \square \\
 \hline
 \square \square \square
 \end{array}$$

2. 
$$\begin{array}{r}
 16 \\
 \times 12 \\
 \hline
 \square \square \\
 \square \square \\
 \square \square \\
 + \square \square \square \\
 \hline
 \square \square \square
 \end{array}$$

3. 
$$\begin{array}{r}
 19 \\
 \times 13 \\
 \hline
 \square \square \\
 \square \square \\
 \square \square \\
 + \square \square \square \\
 \hline
 \square \square \square
 \end{array}$$

4. 
$$\begin{array}{r}
 24 \\
 \times 12 \\
 \hline
 \square \\
 \square \square \\
 \square \square \\
 + \square \square \square \\
 \hline
 \square \square \square
 \end{array}$$

5. 
$$\begin{array}{r}
 32 \\
 \times 23 \\
 \hline
 \end{array}$$

6. 
$$\begin{array}{r}
 79 \\
 \times 47 \\
 \hline
 \end{array}$$

7. 
$$\begin{array}{r}
 23 \\
 \times 46 \\
 \hline
 \end{array}$$

8. 
$$\begin{array}{r}
 82 \\
 \times 74 \\
 \hline
 \end{array}$$

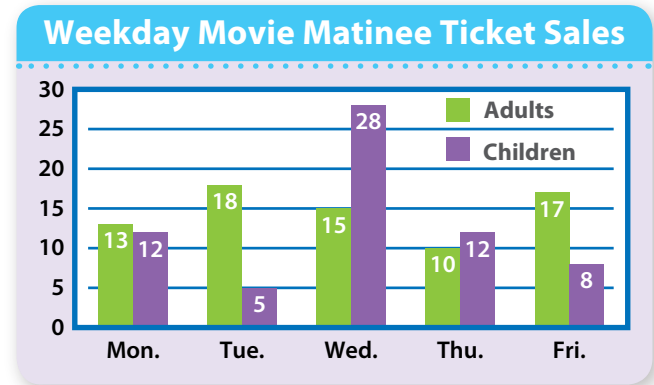
9. © **MP.2 Reasoning** Why can the calculations in red be thought of as simpler problems?

$$\begin{array}{r}
 34 \\
 \times 24 \\
 \hline
 16 \quad 4 \times 4 \\
 120 \quad 4 \times 30 \\
 80 \quad 20 \times 4 \\
 + 600 \quad 20 \times 30 \\
 \hline
 816
 \end{array}$$

10. Explain the mistakes in the calculation below. Show the correct calculation.

$$\begin{array}{r}
 12 \\
 \times 13 \\
 \hline
 6 \\
 3 \\
 20 \\
 + 10 \\
 \hline
 39
 \end{array}$$

11. A movie theater charges \$10 for an adult ticket and \$9 for a child ticket. The goal is to make \$1,200 on adult tickets each week. Did the theater make its goal this week? How much more or less than the goal did the theater make?



12. **Higher Order Thinking** A golf practice range has 245 balls. The owner bought a carton of golf balls. How many golf balls does the owner have after buying the carton?

**Golf Balls**

**DATA**

- 12 balls to a box
- 15 boxes to a crate
- 5 crates to a carton

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13. Select all the partial products needed to find the final product.

$$\begin{array}{r}
 12 \\
 \times 18 \\
 \hline
 16 \\
 \square \\
 20 \\
 + \square \\
 \hline
 216
 \end{array}$$

8  
 80  
 100  
 180  
 600

14. Select all the partial products needed to find the final product.

$$\begin{array}{r}
 41 \\
 \times 77 \\
 \hline
 \square \\
 \square \\
 \square \\
 + 2,800 \\
 \hline
 3,157
 \end{array}$$

7  
 70  
 280  
 700  
 2,800