Name _____

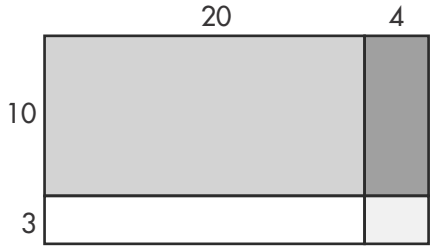
Practice Video Tools Games

Additional Practice 3-4

Multiply 2-Digit by 2-Digit Numbers

Another Look!

There are 24 cars in the Speedy Cup Series. Each car has 13 workers in the pit area. How many pit-area workers are at the race?



There is more than one way to multiply.

Use Partial Products

$$\begin{array}{r} 24 \\ \times\ 13 \\ \hline 12 \\ 60 \\ 40 \\ +\ 200 \\ \hline 312 \end{array}$$

Use the Standard Algorithm

Multiply by the ones. Regroup if necessary.

$$\begin{array}{r} {\scriptstyle 1}\ \ \\ 24 \\ \times\ 13 \\ \hline 72 \end{array}$$

Multiply by the tens. Regroup if necessary.

$$\begin{array}{r} {\scriptstyle 1}\ \ \\ 24 \\ \times\ 13 \\ \hline 72 \\ +\ 240 \\ \hline 312 \end{array}$$

Add the partial products.

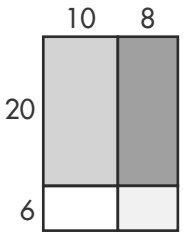
There are 312 pit-area workers at the race.

For **1–10**, use the standard algorithm or partial products to find the product. Draw area models as needed.

You can use rounding or compatible numbers to estimate and check if your answer is reasonable.

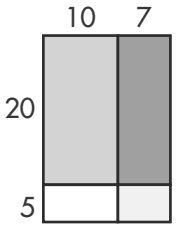
1.

$$\begin{array}{r} 18 \\ \times\ 26 \\ \hline \square\square\square \\ +\ \square\square 0 \\ \hline \square\square\square \end{array}$$



2.

$$\begin{array}{r} 17 \\ \times\ 25 \\ \hline \square\square \\ +\ \square\square 0 \\ \hline \square\square\square \end{array}$$



3. $\begin{array}{r} 88 \\ \times\ 32 \\ \hline \end{array}$

4. $\begin{array}{r} 53 \\ \times\ 48 \\ \hline \end{array}$

5. $\begin{array}{r} 18 \\ \times\ 77 \\ \hline \end{array}$

6. $\begin{array}{r} 67 \\ \times\ 27 \\ \hline \end{array}$

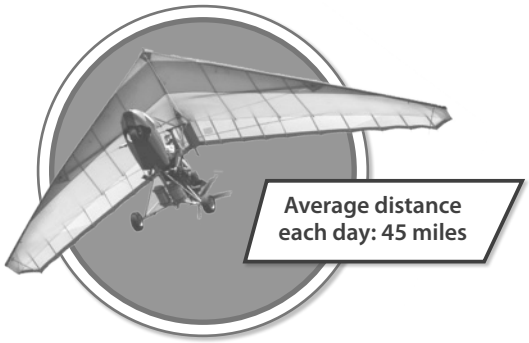
7. $\begin{array}{r} 67 \\ \times\ 34 \\ \hline \end{array}$

8. $\begin{array}{r} 91 \\ \times\ 46 \\ \hline \end{array}$

9. $\begin{array}{r} 56 \\ \times\ 31 \\ \hline \end{array}$

10. $\begin{array}{r} 67 \\ \times\ 57 \\ \hline \end{array}$

11. An ultralight airplane tracked monarch butterflies migrating to Mexico during the month of September. There are 30 days in September. How many miles did the ultralight travel in September?



For **12–13**, use the table at the right.

DATA

Vegetable	Weight of 1 Bushel
Asparagus	24 pounds
Beets	52 pounds
Carrots	50 pounds
Sweet corn	35 pounds

12. How much do 21 bushels of sweet corn weigh?

13. How much do 18 bushels of asparagus and 7 bushels of carrots weigh?

14. Rob purchased a rug for his apartment. The rug is 72 inches by 96 inches. Calculate the area of the rug in square inches.

15. Higher Order Thinking Corina found $62 \times 22 = 1{,}042$. Is Corina's answer reasonable? Explain.

Assessment Practice

16. Maria has 92 flower arrangements. Each arrangement has 48 blue flowers and 50 yellow flowers. Maria calculates there are 9,016 flowers in all the arrangements. Which of the following expressions shows how to use an estimate to check Maria's calculation?

Ⓐ $90 + 50 + 50$

Ⓑ 90×10

Ⓒ $90 \times (50 + 50)$

Ⓓ $90 \times (50 \times 50)$

17. Without calculating, which of the following is a reasonable answer for 28×32?

Ⓐ 196

Ⓑ 496

Ⓒ 896

Ⓓ 12,096

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