Name _____

Another Look!

Find the product of 304 × 23.

$$
\begin{array}{r}
\overset{1}{3}04 \\
\times\ \ \ 23 \\
\hline
912 \\
+\ \ 6080 \\
\hline
6{,}992
\end{array}
$$

Step 1: First, multiply 304 by 3 ones.

Step 2: Then, multiply 304 by 2 tens.

Step 3: Finally, add to get the final product.

1. Use the place-value chart at the right to multiply 36 × 405. Record each step in the correct place in the chart.

14,580

A place-value chart can help keep the numbers in the right place!

thousands period   ones period

hundred thousands	ten thousands	one thousands	hundreds	tens	ones	What I Multiply
			4	0	5	
×				3	6	
		2	4	3	0	
	1	2	1	5	0	
	1	4	5	8	0	

In **2–9**, find each product. Estimate to check for reasonableness.

2.
$$
\begin{array}{r}
203 \\
\times\ \ \ 12 \\
\hline
406 \\
+2030 \\
\hline
2{,}436
\end{array}
$$

3.
$$
\begin{array}{r}
306 \\
\times\ \ \ 21 \\
\hline
306 \\
+6120 \\
\hline
6{,}426
\end{array}
$$

4.
$$
\begin{array}{r}
109 \\
\times\ \ \ 73 \\
\hline
327 \\
+7630 \\
\hline
7{,}957
\end{array}
$$

5.
$$
\begin{array}{r}
601 \\
\times\ \ \ 45 \\
\hline
3005 \\
+24040 \\
\hline
27{,}045
\end{array}
$$

6.
$$
\begin{array}{r}
708 \\
\times\ \ \ 34 \\
\hline
\end{array}
$$
24,072

7.
$$
\begin{array}{r}
520 \\
\times\ \ \ 63 \\
\hline
\end{array}
$$
32,760

8.
$$
\begin{array}{r}
405 \\
\times\ \ \ 70 \\
\hline
\end{array}
$$
28,350

9.
$$
\begin{array}{r}
802 \\
\times\ \ \ 94 \\
\hline
\end{array}
$$
75,388

10. The Memorial Middle School Band has 108 members. They want to buy jackets with the name of the band on the back. What is the difference in the total price of the screen-print and the embroidered jackets?

Jackets	Price (in $)
Screen print name	35
Embroidered name	48

$1,404

11. Critique Reasoning Wildlife protection groups build bat houses to help save bats. One bat house holds about 300 bats. Larry says that 12 bat houses can hold about 4,500 bats. Do you agree? Explain.
Sample answer: No; Since 12 × 300 = 3,600, 12 bat houses can hold about 3,600 bats. Larry's estimate of 4,500 bats is much higher than 3,600.

12. Higher Order Thinking Replace the a, b, c, and d with the digits 2, 4, 6, 8 to form the greatest product. Each digit can only be used once. Explain your substitutions.

$$
\begin{array}{r}
a\,0\,b \\
\times \quad c\,d \\
\hline
51{,}328
\end{array}
$$

$a = 8$, $b = 2$, $c = 6$, $d = 4$; **Sample answer: The greatest digits need to be in the higher place values to get the greatest product.**

13. A packing crate can hold 205 avocados. There were 7,000 avocados picked at a large grove. The owner has 36 packing crates. Does he have enough crates to ship out the avocados? Explain.
Yes; 205 × 36 = 7,380. The owner has more crates than he needs.

14. Sarah found that the product of 49 and 805 is 3,165. How would finding an estimate help her know that the answer is NOT reasonable?
Sample answer: Using estimation, she could find 50 × 800 = 40,000. 3,165 is not close to the estimate of 40,000.

✓ **Assessment Practice**

15. What is the product?

$$
\begin{array}{r}
990 \\
\times \quad 37 \\
\hline
\end{array}
$$

36,630