Name _____

Practice Video Tools Games

Additional Practice 3-1

Multiply Greater Numbers by Powers of 10

Another Look!

Patterns can help you multiply by powers of 10.

$53 \times 1 = 53$	$70 \times 1 = 70$
$53 \times 10 = 530$	$70 \times 10^1 = 700$
$53 \times 100 = 5{,}300$	$70 \times 10^2 = 7{,}000$
$53 \times 1{,}000 = 53{,}000$	$70 \times 10^3 = 70{,}000$
$53 \times 10{,}000 = 530{,}000$	$70 \times 10^4 = 700{,}000$

Look at the number of zeros or the exponent for the power of 10. Place that number of zeros on the end of the other factor.

1. To find $61 \times 1{,}000$, place _____ zeros on the end of _____ to form the product _____.

In **2–5**, use patterns to find each product.

2. 75×1
75×10
75×100
$75 \times 1{,}000$
$75 \times 10{,}000$

3. 50×1
50×10
50×100
$50 \times 1{,}000$
$50 \times 10{,}000$

4. 60×1
60×10^1
60×10^2
60×10^3
60×10^4

5. 18×1
18×10^1
18×10^2
18×10^3
18×10^4

In **6–9**, find each product.

6. 84×100

7. 90×10

8. 54×10^2

9. $10^3 \times 12$

In **10–15**, use reasoning to fill in the missing numbers.

10. $45 \times 10^3 =$ _____

11. $12{,}960 = 10^1 \times$ _____

12. $22 \times 10^{__} = 220{,}000$

13. $10^4 \times 30 =$ _____

14. $10^{__} \times 374 = 37{,}400$

15. $70{,}000 = 70 \times 10^{__}$

16. Construct Arguments
Ms. O'Malley's cousin lives 1,650 miles away. Ms. O'Malley won a gift card for 100 gallons of gas. If her car can travel 35 miles on each gallon, can she drive roundtrip to see her cousin on the free gas? Explain how you know.

17. Each beehive on Larson's Honey Farm usually produces 85 pounds of honey per year. About how many pounds of honey will 10^3 hives produce in a year?

18. A hotel chain is ordering new furnishings. What is the total cost of 1,000 sheet sets, 1,000 pillows, and 100 desk chairs?

DATA

Item	Price
Towel sets	$18
Sheet sets	$24
Pillows	$7
Desk chair	$114

19. Which number is greater: 87 or 13.688? How do you know?

20. Higher Order Thinking The weight of an elephant is 10^3 times the weight of a cat. If the elephant weighs 14,000 pounds, how many pounds does the cat weigh? How did you find the answer?

Assessment Practice

21. Which is equivalent to multiplying a number by 10^3?

Ⓐ multiplying by 30
Ⓑ multiplying by 1,000
Ⓒ multiplying by 10,000
Ⓓ multiplying by 10 twice

22. Which is equivalent to 5×10^4? Select all that apply.

☐ $5 \times 10{,}000$
☐ $5 \times 100{,}000$
☐ 5,000
☐ 50,000
☐ 50×10^3

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