Name Key Date _____

1. Fill in the chart.

Words	Expression	The Value of the Expression
a. 25 times the sum of 72 and 28	25 × (72 + 28)	2,500
b. Divide the difference between 1,000 and 850 by 5	(1,000 − 850) ÷ 5	30
c. The sum of 4 twenty-fives and 11 twenty-fives	(4 × 25) + (11 × 25)	375
d. 12 times the sum of 23 and 17	12 × (23 + 17)	480
e. 10 tens the sum of 325 and 75	10 × (325 + 75)	4,000
f. 14 times the sum of 493 and 207	(493 + 207) × 14	9,800

2. Compare the two expressions using <, >, or =. For each, explain how you can determine the answer without calculating.

a. 100 × 12 (>) 50 × (2 × 8)

(50 × 2) × 8

1,200

800

16 × 100 = 1,600 ÷ 2 = 800

b. 47 × 12 (<) 50 fifteens – 3 fifteens

47 fifteens

fifteen sets of 47 is bigger than 12 sets of 47

c. 36 × 36 ( ) 18 eighteens, doubled

18 eighteens

36 × 36 (>) 36 eighteens

10	1	$\frac{1}{10}$
3	3 •	3
3	3	

3. Solve. Use words, numbers, or pictures to explain how your answers to Parts (a) and (b) are related.

a. $33 \times 20 =$ 660

b. $3.3 \times 20 =$ 33 tenths $\times 20 =$ 66

2 area models

33
× 20
660

3.3
× 20
66.0

The digits are exactly the same. But the units in (b) are smaller so the answer is smaller. The ones are 10 ~~times~~ times as large an the tenths so the answer to (a) is ten times larger than (b).

4. Multiply using the standard algorithm. Show your work below each problem. Write the product in the blank.

a. $424 \times 63 =$ 26,712

b. $746 \times 408 =$ 304,368

Show work →

5. For a field trip, the school bought 57 sandwiches for $4.30 each and 29 bags of chips for $1.55 each. How much did the school spend in all?

4.30
× 57
3010
+21500
$245.10
sand.

1.55
× 29
1395
+3100
$44.95
chips

1 1
245.10
+ 44.95
$290.05

The school spent $290.05 in all.

1 yd = 3 ft.

6. Jeanne makes hair bows to sell at the craft fair. Each bow requires 2.5 yards of ribbon.

a. At the fabric store, ribbon is sold by the foot. If Jeanne wants to make 89 bows, how many feet of ribbon must she buy? Show all your work.

2.5 yd = 2.5 x (1 yd)
= 2.5 x (3 ft)
= 7.5 ft

1 bow = 7.5 ft

89
× 7.5
445
+ 6230
667.5 ft

J. has to buy 667.5 ft of ribbon for 89 bows

b. If the ribbon costs ~~20¢~~ .10¢ per foot, what is the total cost of the ribbon in dollars? Explain your reasoning, including how you decided where to place the decimal.

667.5 x 10¢ = 6675¢ ÷ 100 = $66.75

When I multiplied by 10, all the digits got 10 times larger and moved one place to the left. That was 6,675 cents. To find dollars, I divide by 100 which moved my digits back 2 places to the left, so my decimal point went between the 6 and 7.

c. A manufacturer is making 10,000 times as many bows as Jeanne to sell in stores nationwide. Write an expression using exponents to show how many yards of ribbon the manufacturer will need. Do not calculate the total.

$2.5 \times 89 \times 10^4$