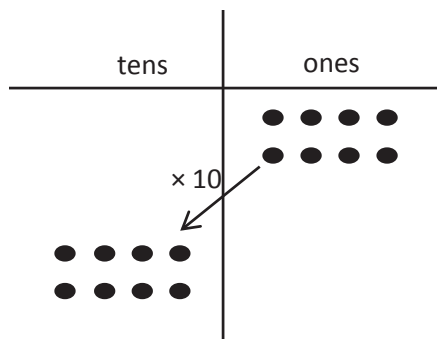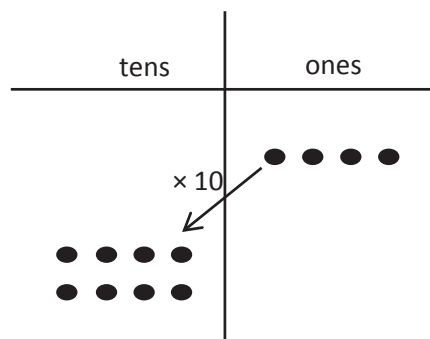Name _____ Date _____

1. Use the chart to complete the equations. Then, solve. The first one has been done for you.

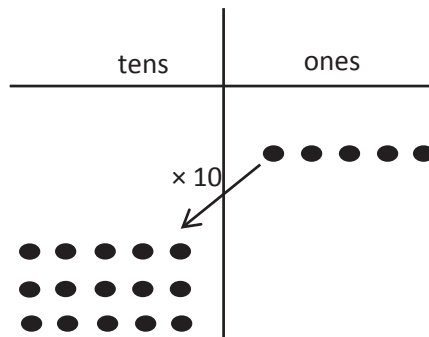| tens	ones
	• • • •
	• • • •
× 10 ↙	
• • • •	
• • • •	

a. $(2 \times 4) \times 10$

   $= (8 \text{ ones}) \times 10$

   $= \underline{\quad 80 \quad}$

tens	ones
	• • •
× 10 ↙	
• • • •	
• • • •	

b. $2 \times (4 \times 10)$

   $= 2 \times (4 \text{ tens})$

   $= \underline{\qquad}$

tens	ones
	• • • • •
	• • • • •
× 10 ↙	• • • • •
• • • • •	
• • • • •	
• • • • •	

c. $(3 \times 5) \times 10$

   $= (\underline{\quad} \text{ ones }) \times 10$

   $= \underline{\qquad}$

tens	ones
	• • • • •
× 10 ↙	
• • • • •	
• • • • •	
• • • • •	

d. $3 \times (5 \times 10)$

   $= 3 \times (\underline{\quad} \text{ tens})$

   $= \underline{\qquad}$

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Lesson 20: Use place value strategies and the associative property
$n \times (m \times 10) = (n \times m) \times 10$ (where n and m are less than 10) to
multiply by multiples of 10.

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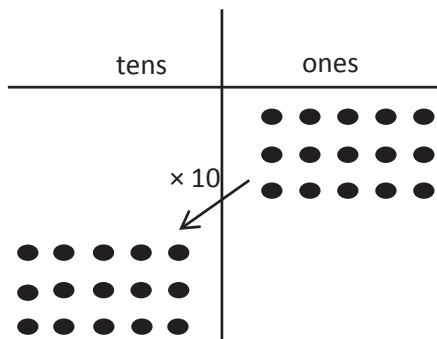
2. Place parentheses in the equations to find the related fact. Then, solve. The first one has been done for you.

$2 \times 20 = 2 \times (2 \times 10)$

$= (2 \times 2) \times 10$

$= \underline{\quad 4 \quad} \times 10$

$= \underline{\quad 40 \quad}$

$2 \times 30 = 2 \times (3 \times 10)$

$= (2 \times 3) \times 10$

$= \underline{\qquad} \times 10$

$= \underline{\qquad}$

$3 \times 30 = 3 \times (3 \times 10)$

$= 3 \times 3 \times 10$

$= \underline{\qquad} \times 10$

$= \underline{\qquad}$

$2 \times 50 = 2 \times 5 \times 10$

$= 2 \times 5 \times 10$

$= \underline{\qquad} \times 10$

$= \underline{\qquad}$

3. Gabriella solves 20 × 4 by thinking about 10 × 8. Explain her strategy.

Lesson 20:   Use place value strategies and the associative property
                $n \times (m \times 10) = (n \times m) \times 10$ (where n and m are less than 10) to
                multiply by multiples of 10.

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