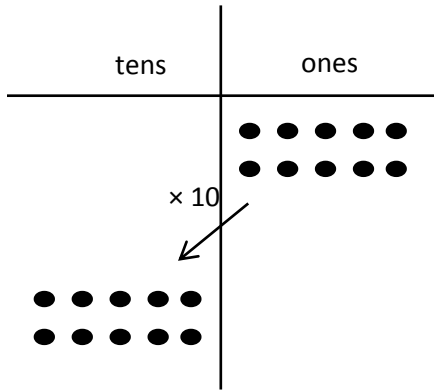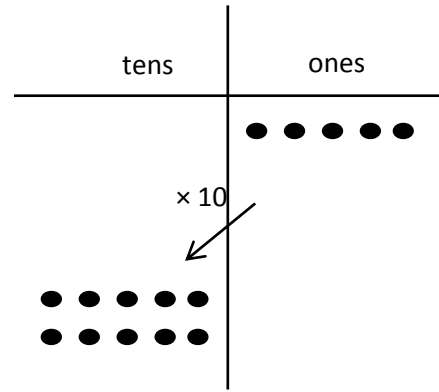Name _____   Date _____
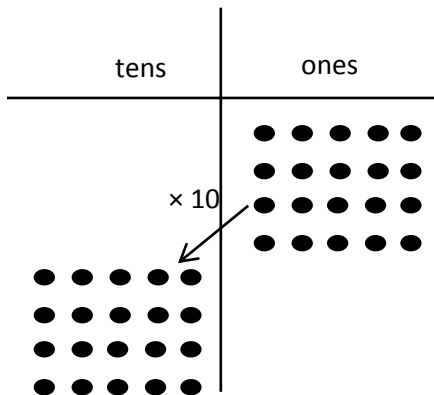
1. Use the chart to complete the equations. Then solve.
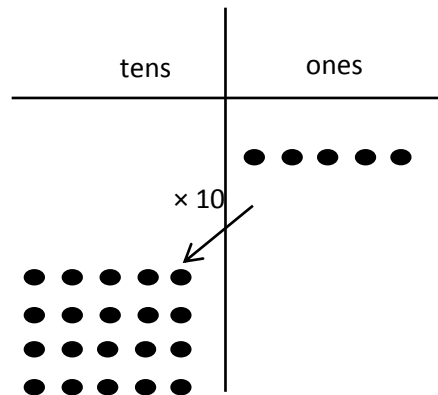
a. $(2 \times 5) \times 10$

= (10 ones) × 10

= _**100**_

b. $2 \times (5 \times 10)$

= 2 × (5 tens)

= _**100**_

c. $(4 \times 5) \times 10$

= (_**20**_ ones) × 10

= _**200**_

d. $4 \times (5 \times 10)$

= 4 × (_**5**_ tens)

= _**200**_

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 multiples of 10.

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2. Solve. Place ( ) in (c) and (d) as needed to find the related fact.

a. $3 \times 20 = 3 \times (2 \times 10)$

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

$= \underline{6} \times 10$

$= \underline{60}$

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

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

$= \underline{9} \times 10$

$= \underline{90}$

c. $3 \times 40 = 3 \times (4 \times 10)$

$= (3 \times 4) \times 10$

$= \underline{12} \times 10$

$= \underline{120}$
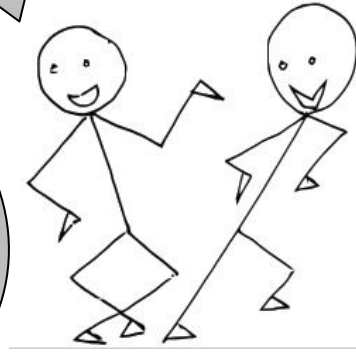
d. $3 \times 50 = 3 \times 5 \times 10$

$= (3 \times 5) \times 10$

$= \underline{15} \times 10$

$= \underline{150}$

3. Danny solves 5 × 20 by thinking about 10 × 10. Explain his strategy.

$5 \times 20 = 5 \times 2 \times 10$

$= (5 \times 2) \times 10$

$= 10 \times 10$

After factoring 20 to 2×10, parentheses can be added to show that 5×20 = 10 × 10.

COMMON CORE

Lesson 20:   Use place value strategies and the associative property
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to multiply multiples of 10.

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