Name _____   Date _____

1. Use the array to complete the equation.
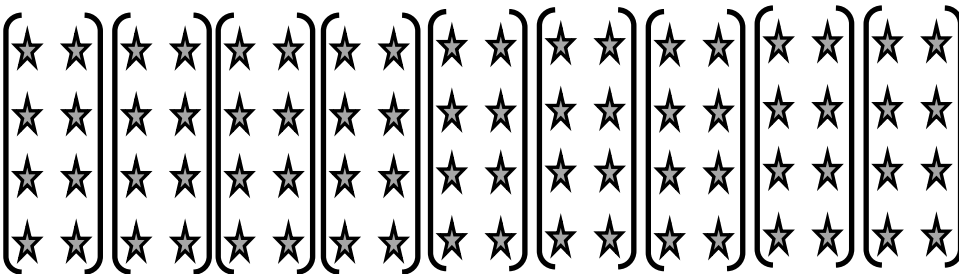

a. $3 \times 16 =$ _____

b. $(3 \times \underline{2}) \times 8$

$= \underline{6} \times \underline{8}$

$= \underline{48}$

c. $4 \times 18 =$ _____

d. $(4 \times \underline{2}) \times 9$

$= \underline{8} \times \underline{9}$

$= \underline{72}$

Lesson 9:   Model the associative property as a strategy to multiply.
Date: 7/31/13

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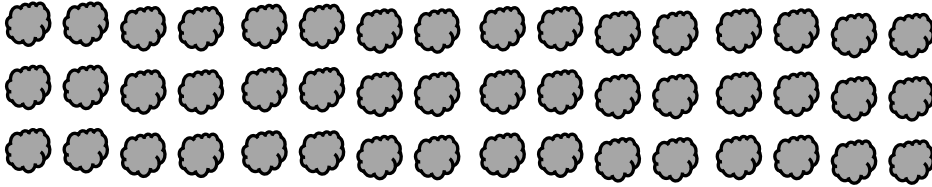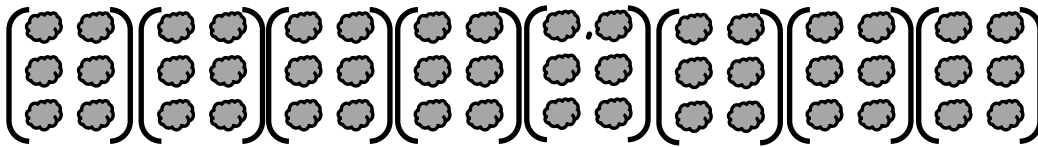
2. Place ( ) in the equations to simplify and solve.

$12 \times 4 = (6 \times 2) \times 4$

$\quad = 6 \times (2 \times 4)$

$\quad = 6 \times \underline{8}$

$= \underline{\quad 48 \quad}$

$3 \times 14 = 3 \times (2 \times 7)$

$\quad = (3 \times 2) \times 7$

$\quad = \underline{6} \times 7$

$= \underline{42}$

$3 \times 12 = 3 \times (3 \times 4)$

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

$\quad = \underline{9} \times 4$

$= \underline{36}$

3. Solve. Then match the related facts.

a. $20 \times 2 = \underline{\quad 40 \quad} =$

b. $30 \times 2 = \underline{60} =$

c. $35 \times 2 = \underline{70} =$

d. $40 \times 2 = \underline{80} =$

$6 \times (5 \times 2)$

$8 \times (5 \times 2)$

$4 \times (5 \times 2)$

$7 \times (5 \times 2)$