

Name _____

Date _____

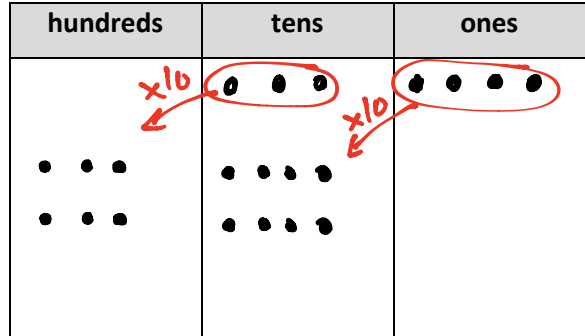
1. Use the associative property to rewrite each expression. Solve using disks and then complete the number sentences.

a. 20×34

$$= (2 \times 10) \times 34$$

$$= 2 \times (10 \times 34)$$

$$= \underline{680}$$

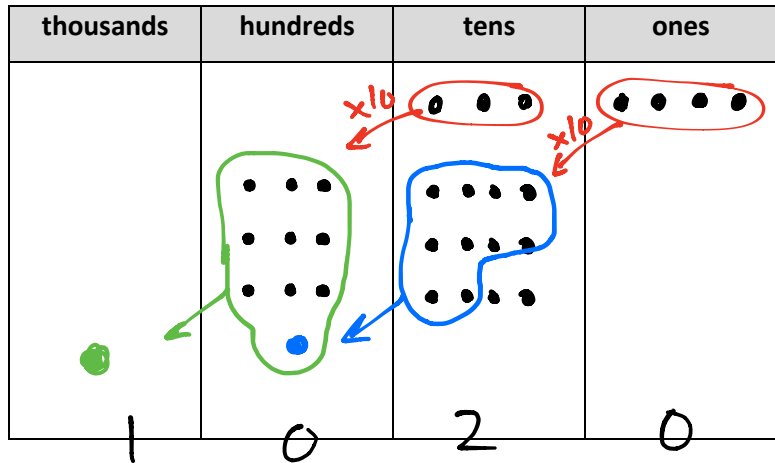


b. 30×34

$$= (3 \times 10) \times \underline{34}$$

$$= 3 \times (10 \times \underline{34})$$

$$= \underline{1,020}$$

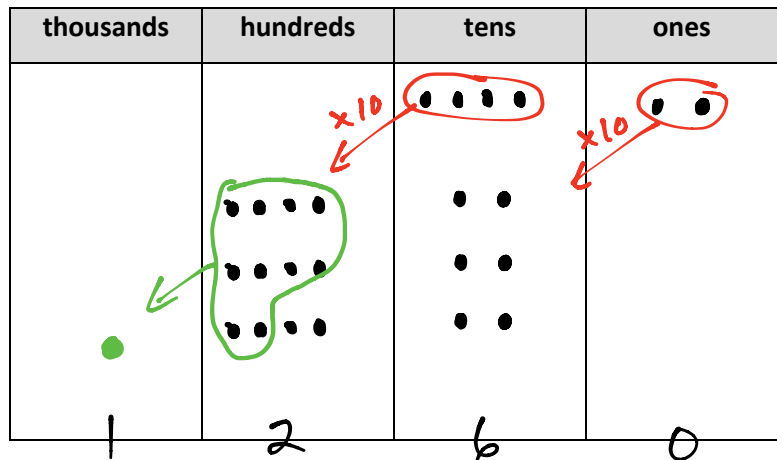


c. 30×42

$$= (3 \times 10) \times \underline{42}$$

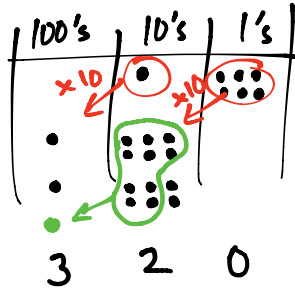
$$= 3 \times (10 \times \underline{42})$$

$$= \underline{1,260}$$



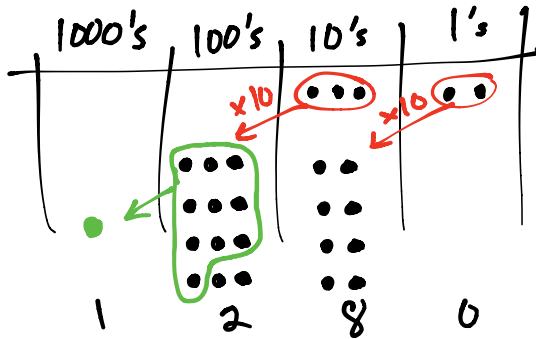
2. Use the associative property and number disks to solve.

a. 20×16
 $= 2 \times (10 \times 16)$
 $= 2 \times 160$
 $= 320$



b. 40×32

$= 4 \times (10 \times 32)$
 $= 4 \times 320$
 $= 1,280$



3. Use the associative property without number disks to solve.

a. 30×21

$= 3 \times (10 \times 21)$
 $= 3 \times 210$
 $= 630$

$$\begin{array}{r} 210 \\ \times 3 \\ \hline 630 \end{array}$$

b. 60×42

$= 6 \times (10 \times 42)$
 $= 6 \times 420$
 $= 2,520$

$$\begin{array}{r} 420 \\ \times 6 \\ \hline 2,520 \end{array}$$

4. Use the distributive property to solve the following. Distribute the second factor.

a. 40×43

$= (40 \times 40) + (40 \times 3)$
 $= 1600 + 120$
 $= 1,720$

b. 70×23

$= (70 \times 20) + (70 \times 3)$
 $= 1400 + 210$
 $= 1,610$