

Name _____

Date _____

1. Represent the following expressions with disks, regrouping as necessary, writing a matching expression, and recording the partial products vertically as shown below.

a. 2×424

hundreds	tens	ones

$$\begin{array}{r} 424 \\ \times 2 \\ \hline 848 \end{array}$$

$\rightarrow 2 \times 4$ ones
 $\rightarrow 2 \times 2$ tens
 $\rightarrow 2 \times 4$ hundreds

$$2 \times 4 \text{ hundreds} + 2 \times 2 \text{ tens} + 2 \times 4 \text{ ones}$$

$$8 \text{ hundreds} + 4 \text{ tens} + 8 \text{ ones}$$

b. 3×424

1000's	hundreds	tens	ones

$$\begin{array}{r} 424 \\ \times 3 \\ \hline 1272 \end{array}$$

12 (3×4 ones)
 60 (3×2 tens)
 1200 (3×4 hundreds)

$$3 \times 4 \text{ hundreds} + 3 \times 2 \text{ tens} + 3 \times 4 \text{ ones}$$

$$12 \text{ hundreds} + 6 \text{ tens} + 12 \text{ ones}$$

c. $4 \times 1,424$

$$1 \text{ thousand} + 2 \text{ hundreds} + 7 \text{ tens} + 2 \text{ ones}$$

1000's	100's	10's	1's

$$4 \times 1 \text{ thousand} + 4 \times 4 \text{ hundreds} + 4 \times 2 \text{ tens} + 4 \times 4 \text{ ones}$$

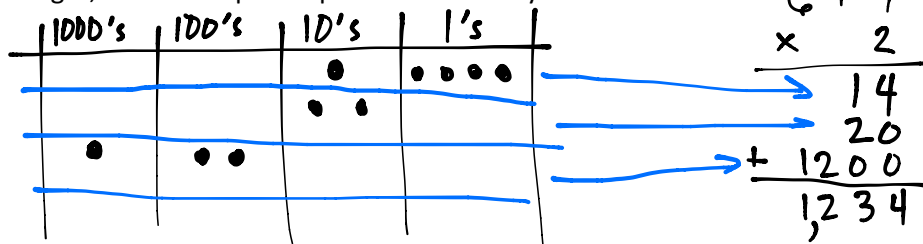
$$4 \text{ thousands} + 16 \text{ hundreds} + 8 \text{ tens} + 16 \text{ ones}$$

$$5 \text{ thousands} + 6 \text{ hundreds} + 9 \text{ tens} + 6 \text{ ones}$$

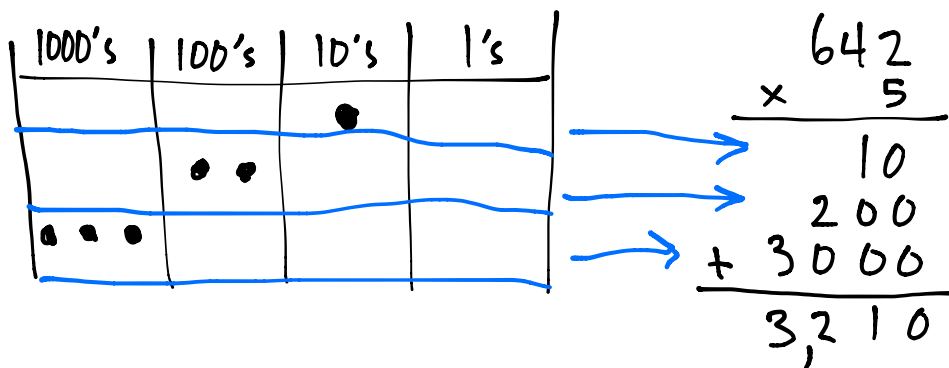
$$\begin{array}{r} 1424 \\ \times 4 \\ \hline 5696 \end{array}$$

2. Represent the following expressions with disks, using either method shown in the class, regrouping as necessary. To the right, record the partial products vertically.

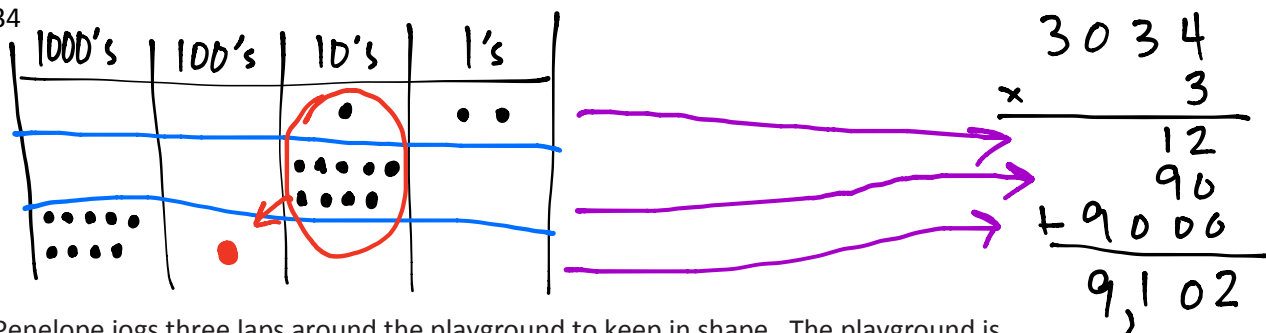
a. 2×617



b. 5×642

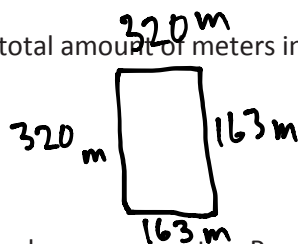


c. $3 \times 3,034$



3. Every day, Penelope jogs three laps around the playground to keep in shape. The playground is rectangular with a width of 163 meters and a length of 320 meters.

- a. Find the total amount of meters in one lap.



$$P = 2 \times (l + w)$$

$$= 2 \times (320 + 163)$$

$$= 2 \times (483)$$

$$= 966$$

966m in one lap

- b. Determine how many meters Penelope jogs in three laps.

$$\begin{array}{r} 966 \\ \times 3 \\ \hline 18 \\ 180 \\ + 2700 \\ \hline 2898 \end{array}$$

Penelope runs 2,898 m in 3 laps.