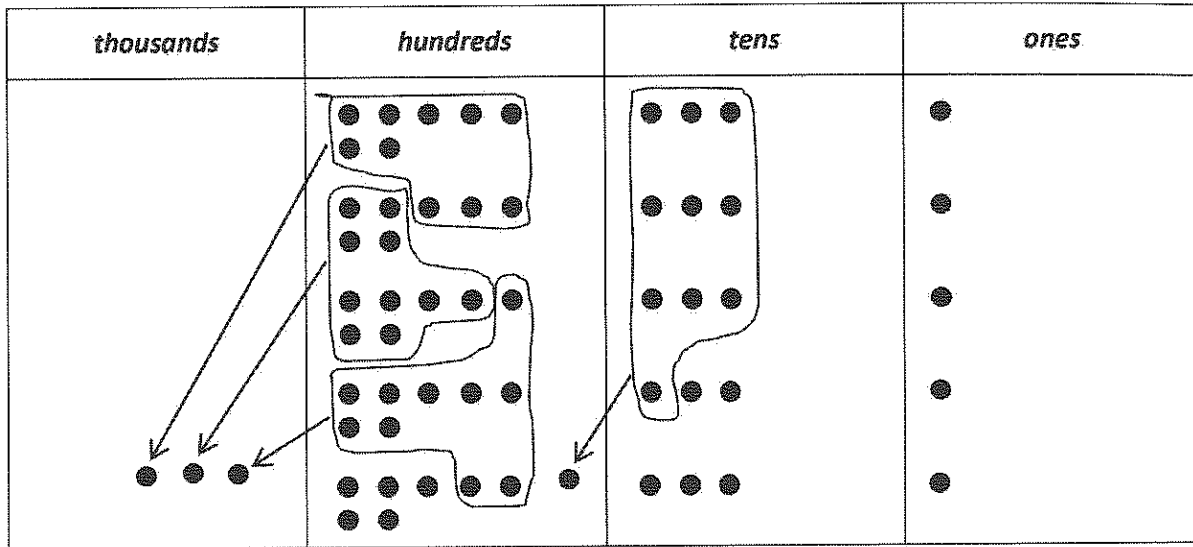## G4-M3-Lesson 8

Represent the following with disks, using either method shown in class, regrouping as necessary. Below the place value chart, record the partial product vertically.

1. 5×731

thousands	hundreds	tens	ones

5×7 *hundreds* $+$ 5×3 *tens* $+$ 5×1 *one*

3 *thousands* $+$ 6 *hundreds* $+$ 5 *tens* $+$ 5 *ones* $= 3,655$

> When there are 10 units in any place, I compose a larger unit.

$$
\begin{array}{r}
7 \quad 3 \quad 1 \\
\times \qquad 5 \\
\hline
5 \\
1 \quad 5 \quad 0 \\
+ \; 3, \; 5 \quad 0 \quad 0 \\
\hline
3, \; 6 \quad 5 \quad 5
\end{array}
$$

$5 \rightarrow 5 \times 1$ *one*

$1 \; 5 \; 0 \rightarrow 5 \times 3$ *tens*

$+ \; 3, \; 5 \; 0 \; 0 \rightarrow 5 \times 7$ *hundreds*

> The partial products mirror the disks on the place value chart. I draw and record the total value of each unit.

Lesson 8: Extend the use of place value disks to represent three- and four-digit by one-digit multiplication.

EUREKA MATH

2. Janice rides her bike around the block. The block is rectangular with a width of 172 m and a length of 230 m.

   a. Determine how many meters Janice rides if she goes around the block one time.

   230 m

   172 m

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

   $P = 2 \times 402$

   $P = 804$ *One lap is 804 meters.*
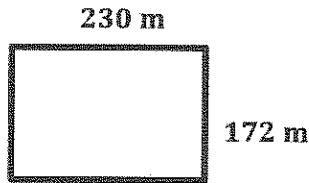
   $$\begin{array}{ccc} & 1 & 7 & 2 \\ + & 2 & 3 & 0 \\ \hline & 4 & 0 & 2 \end{array}$$

   $$\begin{array}{ccc} & 4 & 0 & 2 \\ \times & & 2 \\ \hline & & 4 & \rightarrow 2 \times 2 \text{ ones} \\ & & 0 & \rightarrow 2 \times 0 \text{ tens} \\ + & 8 & 0 & 0 & \rightarrow 2 \times 4 \text{ hundreds} \\ \hline & 8 & 0 & 4 \end{array}$$

   b. Determine how many meters Janice rides if she goes around the block three times.

   $$\begin{array}{cccc} & 8 & 0 & 4 \\ \times & & & 3 \\ \hline & & 1 & 2 & \rightarrow 3 \times 4 \text{ ones} \\ & & & 0 & \rightarrow 3 \times 0 \text{ tens} \\ + & 2, & 4 & 0 & 0 & \rightarrow 3 \times 8 \text{ hundreds} \\ \hline & 2, & 4 & 1 & 2 \end{array}$$

   Janice rides 2,412 meters.