

Name Jack

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.  $1 \times 43$

tens	ones
●●●●	●●●

$1 \times 4 \text{ tens} + 1 \times 3 \text{ ones}$

$$\begin{array}{r} 43 \\ \times 1 \\ \hline 43 \\ + 40 \\ \hline 43 \end{array} \rightarrow \begin{array}{l} 1 \times 3 \text{ ones} \\ 1 \times 4 \text{ tens} \end{array}$$

b.  $2 \times 43$

tens	ones
●●●●	●●●
●●●●	●●●

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

$8 \text{ tens} + 6 \text{ ones} = 86$

$$\begin{array}{r} 43 \\ \times 2 \\ \hline 86 \\ + 80 \\ \hline 86 \end{array} \rightarrow \begin{array}{l} 2 \times 3 \text{ ones} \\ 2 \times 4 \text{ tens} \end{array}$$

c.  $3 \times 43$

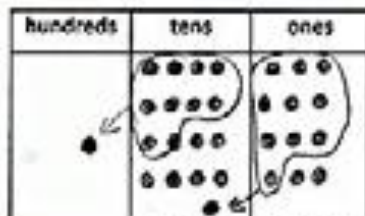
hundreds	tens	ones
●	●●●●	●●●
	●●●●	●●●
	●●●●	●●●

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

$1 \text{ hundred} + 2 \text{ tens} + 9 \text{ ones} = 129$

$$\begin{array}{r} 43 \\ \times 3 \\ \hline 129 \\ + 120 \\ \hline 129 \end{array} \rightarrow \begin{array}{l} 3 \times 3 \text{ ones} \\ 3 \times 4 \text{ tens} \end{array}$$

d.  $4 \times 43$



$4 \times 4 \text{ tens} + 4 \times 3 \text{ ones}$   
 $1 \text{ hundred} + 7 \text{ tens} + 2 \text{ ones} = 172$

$$\begin{array}{r} 43 \\ \times 4 \\ \hline 12 \rightarrow 4 \times 3 \text{ ones} \\ + 160 \rightarrow 4 \times 4 \text{ tens} \\ \hline 172 \end{array}$$

2. Represent the following expressions with disks, regrouping as necessary. To the right, record the partial products vertically.

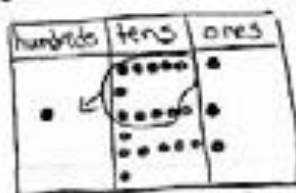
a.  $2 \times 36$



$2 \times 3 \text{ tens} + 2 \times 6 \text{ ones}$   
 $7 \text{ tens} + 2 \text{ ones} = 72$

$$\begin{array}{r} 36 \\ \times 2 \\ \hline 12 \rightarrow 2 \times 6 \text{ ones} \\ + 60 \rightarrow 2 \times 3 \text{ tens} \\ \hline 72 \end{array}$$

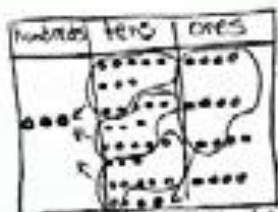
b.  $3 \times 61$



$3 \times 6 \text{ tens} + 3 \times 1 \text{ one}$   
 $1 \text{ hundred} + 8 \text{ tens} + 3 \text{ ones} = 183$

$$\begin{array}{r} 61 \\ \times 3 \\ \hline 3 \rightarrow 3 \times 1 \text{ one} \\ + 180 \rightarrow 3 \times 6 \text{ tens} \\ \hline 183 \end{array}$$

c.  $4 \times 84$



$4 \times 8 \text{ tens} + 4 \times 4 \text{ ones}$   
 $3 \text{ hundreds} + 3 \text{ tens} + 6 \text{ ones} = 336$

$$\begin{array}{r} 84 \\ \times 4 \\ \hline 16 \rightarrow 4 \times 4 \text{ ones} \\ + 320 \rightarrow 4 \times 8 \text{ tens} \\ \hline 336 \end{array}$$

