

Name _____

Date _____

Example:

$5 \times 10 = 50$

$5 \text{ ones} \times 10 = 5 \text{ tens}$

thousands	hundreds	tens	ones

Draw place value disks and arrows as shown to represent each product.

1. $7 \times 100 =$ _____

$7 \times 10 \times 10 =$ _____

$7 \text{ ones} \times 100 =$ _____

thousands	hundreds	tens	ones

2. $7 \times 1,000 =$ _____

$7 \times 10 \times 10 \times 10 =$ _____

$7 \text{ ones} \times 1,000 =$ _____

thousands	hundreds	tens	ones

3. Fill in the blanks in the following equations.

a. $8 \times 10 =$ _____

b. _____ $\times 8 = 800$

c. $8,000 =$ _____ $\times 1,000$

d. $10 \times 3 =$ _____

e. $3 \times$ _____ $= 3,000$

f. _____ $\times 3 = 300$

g. $1,000 \times 4 =$ _____

h. _____ $= 10 \times 4$

i. $400 =$ _____ $\times 100$

Draw place value disks and arrows to represent each product.

4. $15 \times 10 =$ _____

(1 ten 5 ones) $\times 10 =$ _____

thousands	hundreds	tens	ones

5. $17 \times 100 =$ _____

$17 \times 10 \times 10 =$ _____

(1 ten 7 ones) $\times 100 =$ _____

thousands	hundreds	tens	ones

6. $36 \times 1,000 =$ _____

$36 \times 10 \times 10 \times 10 =$ _____

(3 tens 6 ones) $\times 1,000 =$ _____

ten thousands	thousands	hundreds	tens	ones

Decompose each multiple of 10, 100, or 1000 before multiplying.

7. $2 \times 80 = 2 \times 8 \times$ _____

$= 16 \times$ _____

$=$ _____

8. $2 \times 400 = 2 \times$ _____ \times _____

$=$ _____ \times _____

$=$ _____

9. $5 \times 5,000 =$ _____ \times _____ \times _____

$=$ _____ \times _____

$=$ _____

10. $7 \times 6,000 =$ _____ \times _____ \times _____

$=$ _____ \times _____

$=$ _____

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Draw place value disks to represent the value of the following expressions.

1. $5 \times 2 =$ _____

5 times _____ ones is _____ ones.

thousands	hundreds	tens	ones

$$\begin{array}{r} 2 \\ \times 5 \\ \hline \end{array}$$

2. $5 \times 20 =$ _____

5 times _____ tens is _____.

thousands	hundreds	tens	ones

$$\begin{array}{r} 20 \\ \times 5 \\ \hline \end{array}$$

3. $5 \times 200 =$ _____

5 times _____ is _____.

thousands	hundreds	tens	ones

$$\begin{array}{r} 200 \\ \times 5 \\ \hline \end{array}$$

4. $5 \times 2,000 =$ _____

_____ times _____ is _____.

thousands	hundreds	tens	ones

$$\begin{array}{r} 2,000 \\ \times 5 \\ \hline \end{array}$$

5. Find the product.

a. 20×9	b. 6×70	c. 7×700	d. 3×900
e. 9×90	f. 40×7	g. 600×6	h. $8 \times 6,000$
i. 5×70	j. 5×80	k. 5×200	l. $6,000 \times 5$

6. At the school cafeteria, each student who orders lunch gets 6 chicken nuggets. The cafeteria staff prepares enough for 300 kids. How many chicken nuggets does the cafeteria staff prepare altogether?

7. Jaelynn has 30 times as many stickers as her brother. Her brother has 8 stickers. How many stickers does Jaelynn have?
8. The flower shop has 40 times as many flowers in one cooler as Julia has in her bouquet. The cooler has 120 flowers. How many flowers are in Julia's bouquet?

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Represent the following problem by drawing disks in the place value chart.

1. To solve 30×60 , think

$(3 \text{ tens} \times 6) \times 10 = \underline{\hspace{2cm}}$

$30 \times (6 \times 10) = \underline{\hspace{2cm}}$

$30 \times 60 = \underline{\hspace{2cm}}$

hundreds	tens	ones

2. Draw an area model to represent 30×60 .

$3 \text{ tens} \times 6 \text{ tens} = \underline{\hspace{2cm}}$

3. Draw an area model to represent 20×20 .

$2 \text{ tens} \times 2 \text{ tens} = \underline{\hspace{2cm}}$

$20 \times 20 = \underline{\hspace{2cm}}$

4. Draw an area model to represent 40×60 .

$4 \text{ tens} \times 6 \text{ tens} = \underline{\hspace{2cm}}$

$40 \times 60 = \underline{\hspace{2cm}}$

Rewrite each equation in unit form and solve.

5. $50 \times 20 = \underline{\hspace{2cm}}$

$5 \text{ tens} \times 2 \text{ tens} = \underline{\hspace{1cm}} \text{ hundreds}$

6. $30 \times 50 = \underline{\hspace{2cm}}$

$3 \text{ tens} \times 5 \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \text{ hundreds}$

7. $60 \times 20 = \underline{\hspace{2cm}}$

$\underline{\hspace{1cm}} \text{ tens} \times \underline{\hspace{1cm}} \text{ tens} = 12 \underline{\hspace{1cm}}$

8. $40 \times 70 = \underline{\hspace{2cm}}$

$\underline{\hspace{1cm}} \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \text{ hundreds}$

9. There are 60 seconds in a minute and 60 minutes in an hour. How many seconds are in one hour?

10. To print a comic book, 50 pieces of paper are needed. How many pieces of paper are needed to print 40 comic books?

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

a. 3×24

tens	ones

b. 3×42

hundreds	tens	ones

c. 4×34

hundreds	tens	ones

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

a. 4×27

hundreds	tens	ones

b. 5×42

hundreds	tens	ones

3. Cindy says she found a shortcut for doing multiplication problems. When she multiplies 3×24 , she says, "3 \times 4 is 12 ones, or 1 ten and 2 ones. Then, there's just 2 tens left in 24, so add it up, and you get 3 tens and 2 ones." Do you think Cindy's shortcut works? Explain your thinking in words, and justify your response using a model or partial products.

Name _____

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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
● ● ● ●	● ●	● ● ● ●

$$\begin{array}{r}
 424 \\
 \times 2 \\
 \hline
 \\
 + \\
 \hline
 \end{array}
 \begin{array}{l}
 \rightarrow 2 \times \text{ones} \\
 \rightarrow 2 \times \text{tens} \\
 \rightarrow 2 \times \text{hundreds}
 \end{array}$$

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

b. 3×424

hundreds	tens	ones

c. $4 \times 1,424$

2. Represent the following expressions with disks, using either method shown in 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 m and a length of 320 m.
- a. Find the total amount of meters in one lap.
- b. Determine how many meters Penelope jogs in three laps.