



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.  $1 \times 43$

tens	ones
	



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

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

43

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

b.  $2 \times 43$

tens	ones
	




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

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

86

$$\begin{array}{r} 43 \\ \times 2 \\ \hline 6 \\ + 80 \\ \hline 86 \end{array} \rightarrow \begin{array}{l} 2 \times 3 \text{ ones} \\ 2 \times 4 \text{ tens} \end{array}$$

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

$$\begin{array}{r} 43 \\ \times 3 \\ \hline 9 \\ + 120 \\ \hline 129 \end{array} \rightarrow \begin{array}{l} 3 \times 3 \text{ ones} \\ 3 \times 4 \text{ tens} \end{array}$$

d.  $4 \times 43$

hundreds	tens	ones

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

$$\begin{array}{r} 43 \\ \times 4 \\ \hline 12 \\ + 160 \\ \hline 172 \end{array}$$

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

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

a.  $2 \times 36$

hundreds	tens	ones

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

$$\begin{array}{r} 36 \\ \times 2 \\ \hline 12 \\ + 60 \\ \hline 72 \end{array}$$

$2 \times 6 \text{ ones}$   
 $2 \times 3 \text{ tens}$

b.  $3 \times 61$

hundreds	tens	ones

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

$$\begin{array}{r} 61 \\ \times 3 \\ \hline 3 \\ + 180 \\ \hline 183 \end{array}$$

$3 \times 1 \text{ ones}$   
 $3 \times 6 \text{ tens}$

c.  $4 \times 84$

hundreds	tens	ones

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

$$\begin{array}{r} 84 \\ \times 4 \\ \hline 16 \\ + 320 \\ \hline 336 \end{array}$$

$4 \times 4 \text{ ones}$   
 $4 \times 8 \text{ tens}$

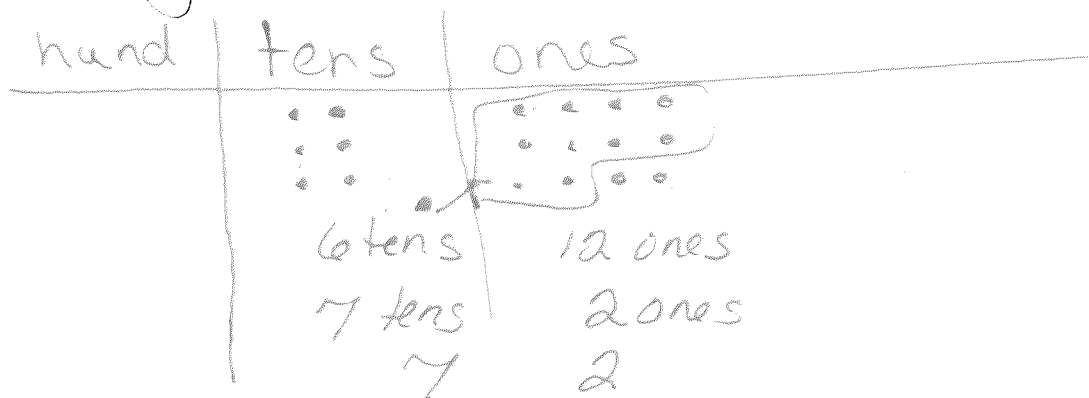
Name \_\_\_\_\_

Date \_\_\_\_\_

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

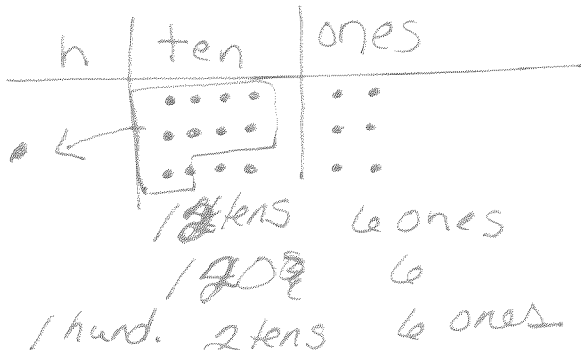
3 groups of 24

a.  $3 \times 24$



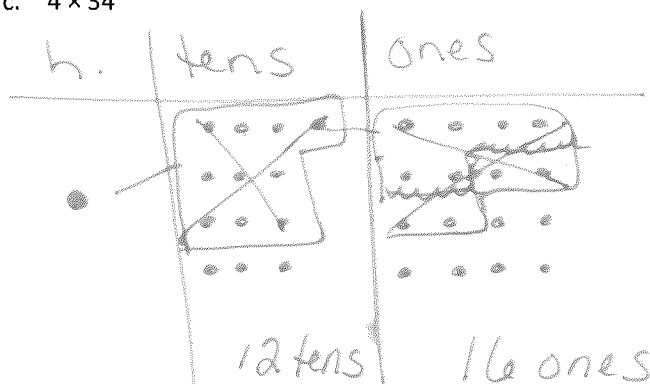
$$\begin{array}{r} 24 \\ \times 3 \\ \hline 12 \\ + 60 \\ \hline 72 \end{array}$$

b.  $3 \times 42$



$$\begin{array}{r} 42 \\ \times 3 \\ \hline 6 \\ + 120 \\ \hline 126 \end{array}$$

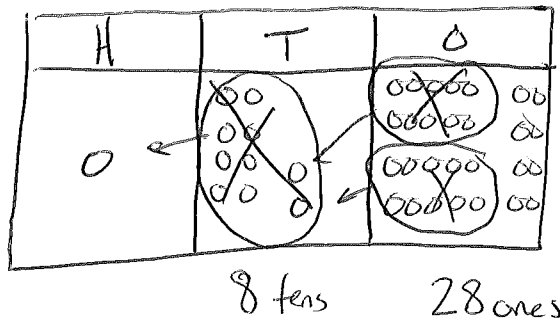
c.  $4 \times 34$



$$\begin{array}{r} 34 \\ \times 4 \\ \hline 16 \\ + 120 \\ \hline 136 \end{array}$$

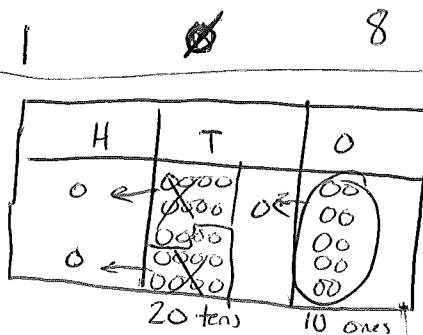
2. Represent the following expressions with disks, regrouping as necessary. To the right, record the partial products vertically.

a.  $4 \times 27$



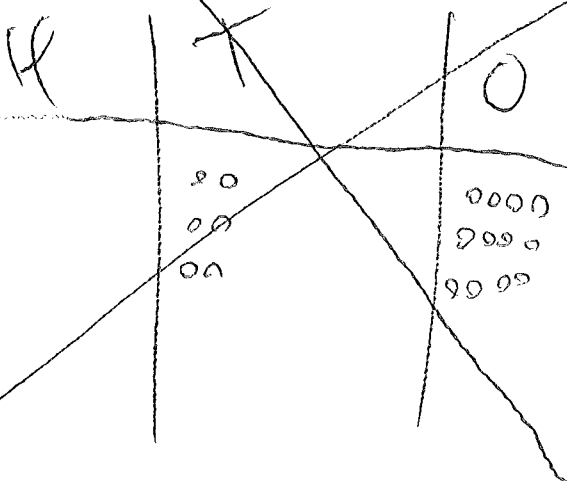
$$\begin{array}{r} 27 \\ \times 4 \\ \hline 108 \end{array}$$

b.  $5 \times 42$



$$\begin{array}{r} 42 \\ \times 5 \\ \hline 210 \end{array}$$

3. Cindy says she found a shortcut for doing multiplication problems. When she multiplies  $3 \times 24$ , 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.



No b/c

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.  $1 \times 213$

hundreds	tens	ones
• •	•	• • •

$$\begin{array}{r} 213 \\ \times 1 \\ \hline 3 \rightarrow 1 \times 3 \text{ ones} \\ 10 \rightarrow 1 \times 1 \text{ ten} \\ + 200 \rightarrow 1 \times 2 \text{ hundreds} \\ \hline 213 \end{array}$$

$1 \times 2$  hundreds +  $1 \times 1$  ten +  $1 \times 3$  ones  
 $2 \text{ hundreds} + 1 \text{ ten} + 3 \text{ ones}$   
 $= 213$

b.  $2 \times 213$

hundreds	tens	ones
• •	•	• • •
• •	•	• • •

$$\begin{array}{r} 213 \\ \times 2 \\ \hline 6 \rightarrow 2 \times 3 \text{ ones} \\ 20 \rightarrow 2 \times 1 \text{ ten} \\ + 400 \rightarrow 2 \times 2 \text{ hundreds} \\ \hline 426 \end{array}$$

$2 \times 2$  hundreds +  $2 \times 1$  ten +  $2 \times 3$  ones  
 $4 \text{ hundreds} + 2 \text{ tens} + 6 \text{ ones}$   
 $= 426$

c.  $3 \times 214$

hundreds	tens	ones
• •	•	• • • •
• •	•	• • • •
• •	•	• • • •

$$\begin{array}{r} 214 \\ \times 3 \\ \hline 12 \rightarrow 3 \times 4 \text{ ones} \\ 30 \rightarrow 3 \times 1 \text{ ten} \\ + 600 \rightarrow 3 \times 2 \text{ hundreds} \\ \hline 642 \end{array}$$

$3 \times 2$  hundreds +  $3 \times 1$  ten +  $3 \times 4$  ones  
 $6 \text{ hundreds} + 4 \text{ tens} + 2 \text{ ones}$   
 $= 642$

d.  $3 \times 1,254$

thousands	hundreds	tens	ones
•	••	••••	••••
•	••	••••	••••
•	••	••••	••••

$$3 \times 1 \text{ thousand} + 3 \times 2 \text{ hundred} + 3 \times 5 \text{ tens} + 3 \times 4 \text{ ones}$$

$$3 \text{ thousand} + 7 \text{ hundred} + 6 \text{ tens} + 2 \text{ ones}$$

$$= 3,762$$

$$\begin{array}{r} 1,254 \\ \times 3 \\ \hline 12 \\ 150 \\ 600 \\ + 3000 \\ \hline 3,762 \end{array}$$

3 x 4 ones  
3 x 5 tens  
3 x 2 hundred  
3 x 1 thousand

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

a.  $3 \times 212$

TH	H	T	O
	••	•	••
	••	•	••
	••	•	••

$$\begin{array}{r} 212 \\ \times 3 \\ \hline 6 \\ 30 \\ + 600 \\ \hline 636 \end{array}$$

b.  $2 \times 4,036$

TH	H	T	O
••••		•••	••••
••••		•••	••••

$$\begin{array}{r} 4,036 \\ \times 2 \\ \hline 12 \\ 60 \\ + 8,000 \\ \hline 8,072 \end{array}$$

c.  $3 \times 2,546$

TH	H	T	O
••	••••	••••	••••
••	••••	••••	••••
••	••••	••••	••••

$$\begin{array}{r} 2,546 \\ \times 3 \\ \hline 18 \\ 120 \\ 1,500 \\ + 6,000 \\ \hline 7,638 \end{array}$$

d.  $3 \times 1,407$

TH	H	T	O
•	••••	••••	••••
•	••••	••••	••••
•	••••	••••	••••

$$\begin{array}{r} 1,407 \\ \times 3 \\ \hline 21 \\ 1,200 \\ + 3,000 \\ \hline 4,221 \end{array}$$

I solved these differently than the sample in the module. In this view the students see that the dots in the columns are before regrouping equal each of the partial products.

3. Every day at the bagel factory, Cyndi makes 5 different kinds of bagels. If she makes 144 of each kind, what is the total number of bagels that she makes?

\* You may want to suggest the vertical method. This would require a lot of dots.

$$\begin{array}{r} 144 \\ \times 5 \\ \hline 20 \\ 200 \\ + 500 \\ \hline 720 \end{array}$$

She makes 720 bagels.



COMMON  
CORE

Lesson 8:

Date:

Extend the use of place value disks to represent three- and four-digit by one-digit multiplication.  
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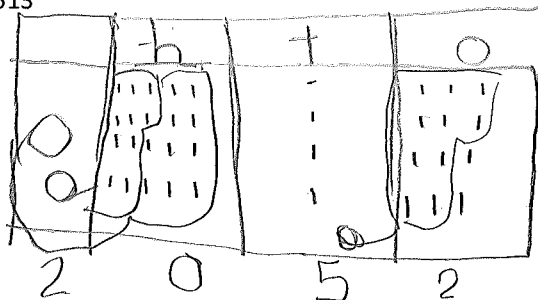
3.C.23

Name \_\_\_\_\_

Date \_\_\_\_\_

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

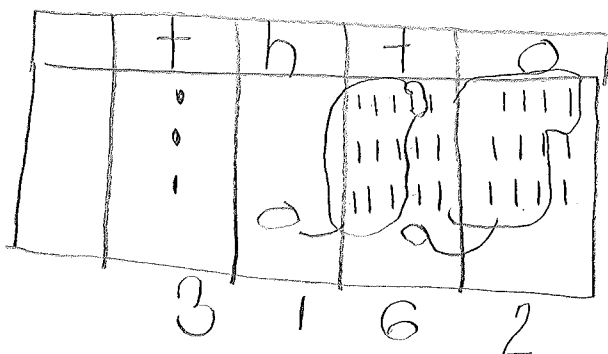
a.  $4 \times 513$



$$\begin{array}{r} 513 \\ \times 4 \\ \hline 12 \\ 40 \\ 2000 \\ \hline 2052 \end{array}$$

4 x 3 ones  
4 x 1 ten  
4 x 5 hundred  
2052

b.  $3 \times 1,054$



$$\begin{array}{r} 1,054 \\ \times 3 \\ \hline 12 \\ 150 \\ 0000 \\ 3000 \\ \hline 3,162 \end{array}$$

3 x 4 ones  
3 x 5 tens  
3 x 0 hundred  
3 x 1 thousand  
3,162



COMMON  
CORE

Lesson 8:

Date:

Extend the use of place value disks to represent three- and four-digit by one-digit multiplication.  
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3.C.24

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.  $2 \times 424$

hundreds	tens	ones
		




$$\begin{array}{r} 424 \\ \times 2 \\ \hline 8 \\ 40 \\ 800 \\ \hline 848 \end{array}$$

$\rightarrow 2 \times 4 \text{ ones}$   
 $\rightarrow 2 \times 2 \text{ tens}$   
 $\rightarrow 2 \times 4 \text{ hundred}$

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

b.  $3 \times 424$

Th

hundreds	tens	ones
		




1 2 7 2

$$\begin{array}{r} 424 \\ \times 3 \\ \hline 12 \\ 60 \\ 1200 \\ \hline 1272 \end{array}$$

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

c.  $4 \times 1,424$

Th

hundreds	tens	ones
		

5 6 9 6

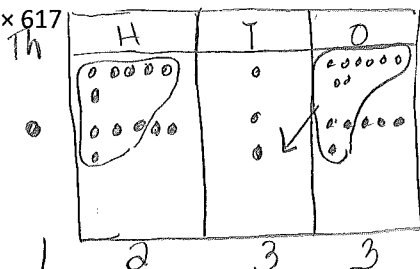
$$\begin{array}{r} 1424 \\ \times 4 \\ \hline 16 \\ 80 \\ 1600 \\ 4000 \\ \hline 5696 \end{array}$$

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



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.

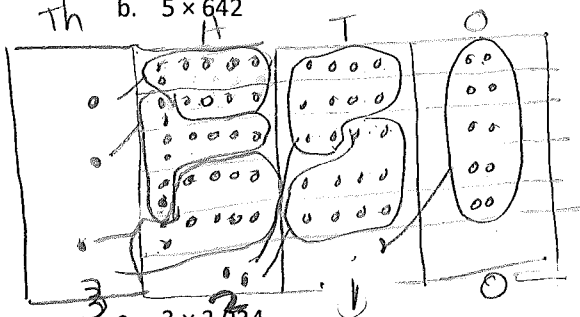
a.  $2 \times 617$



$$\begin{array}{r} 617 \\ \times 2 \\ \hline 14 \\ 120 \\ \hline 1,234 \end{array}$$

2 x 4 ones  
2 x 1 ten  
2 x 6 hundreds

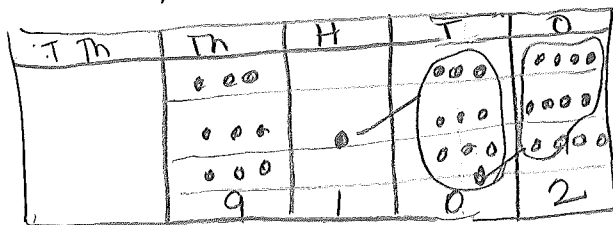
b.  $5 \times 642$



$$\begin{array}{r} 642 \\ \times 5 \\ \hline 10 \\ 200 \\ 3000 \\ \hline 3210 \end{array}$$

5 x 2 ones  
5 x 4 tens  
5 x 6 hund.

c.  $3 \times 3,034$

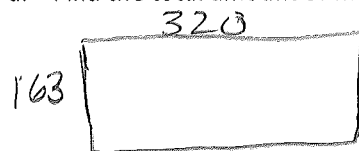


$$\begin{array}{r} 3034 \\ \times 3 \\ \hline 12 \\ 90 \\ 9000 \\ \hline 9,102 \end{array}$$

3 x 4 ones  
3 x 3 tens  
3 x 0 hund.  
3 x 3 Thous

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.



$$\begin{array}{r} 163 \\ + 163 \\ \hline 326 \end{array}$$

$$\begin{array}{r} 320 \\ + 320 \\ \hline 640 \end{array}$$

$$\begin{array}{r} 640 \\ + 326 \\ \hline 966 \end{array}$$

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

$$966 \times 3$$

$$\begin{array}{r} 966 \\ \times 3 \\ \hline 18 \\ 180 \\ 2700 \\ \hline 2,898 \end{array}$$

3 x 6 ones  
3 x 6 Tens  
3 x 9 hundreds

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Solve using each method.

Partial Products	Standard Algorithm
a) $\begin{array}{r} 34 \\ \times 4 \\ \hline 16 \\ + 120 \\ \hline 136 \end{array}$	$\begin{array}{r} 34 \\ \times 4 \\ \hline 136 \end{array}$

Partial Products	Standard Algorithm
b) $\begin{array}{r} 224 \\ \times 3 \\ \hline 12 \\ 60 \\ + 600 \\ \hline 672 \end{array}$	$\begin{array}{r} 224 \\ \times 3 \\ \hline 672 \end{array}$

2. Solve. Use the standard algorithm.

a) $\begin{array}{r} 251 \\ \times 3 \\ \hline 753 \end{array}$	b) $\begin{array}{r} 135 \\ \times 6 \\ \hline 810 \end{array}$	c) $\begin{array}{r} 304 \\ \times 9 \\ \hline 2736 \end{array}$
d) $\begin{array}{r} 405 \\ \times 4 \\ \hline 1620 \end{array}$	e) $\begin{array}{r} 316 \\ \times 5 \\ \hline 1580 \end{array}$	f) $\begin{array}{r} 392 \\ \times 6 \\ \hline 2352 \end{array}$

3. The product of 7 and 86 is 602.

$$\begin{array}{r} 86 \\ \times 7 \\ \hline 602 \end{array}$$

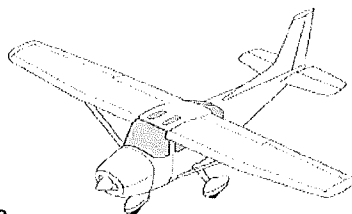
4. 9 times as many as 457 is 4,113.

$$\begin{array}{r} 457 \\ \times 9 \\ \hline 4113 \end{array}$$

5. Jashawn wants to make 5 airplane propellers. He needs 18 cm of wood for each propeller. How many centimeters of wood will he use?

$$\begin{array}{r} 18 \\ \times 5 \\ \hline 90 \end{array}$$

Jashawn will use 90 cm of wood.



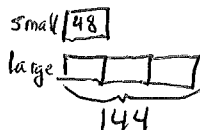
6. One game system costs \$238. How much will 4 game systems cost?

$$\begin{array}{r} 238 \\ \times 4 \\ \hline 952 \end{array}$$

Four game systems cost \$952.

7. A small bag of chips weighs 48 g. A large bag of chips weighs three times as much as the small bag. How much will 7 large bags of chips weigh?

$$\begin{array}{r} 48 \\ \times 3 \\ \hline 144 \end{array}$$



$$\begin{array}{r} 144 \\ \times 7 \\ \hline 1008 \end{array}$$

7 bags will weigh 1,008 grams.



Name \_\_\_\_\_

Date \_\_\_\_\_

1. Solve using the standard algorithm.

<p>a.</p> $\begin{array}{r} 608 \\ \times 9 \\ \hline 5,472 \end{array}$	<p>b.</p> $\begin{array}{r} 574 \\ \times 7 \\ \hline 4,018 \end{array}$
--	--

2. Morgan is 23 years old. Her grandfather is 4 times as old. How old is her grandfather?

$$\begin{array}{r} 23 \\ \times 4 \\ \hline 92 \end{array}$$

$$\begin{array}{r} 23 \\ \times 4 \\ \hline 12 \\ 80 \\ \hline 92 \end{array}$$

Morgan's grandfather is 92 years old.



COMMON  
CORE

Lesson 9:

Date:

Multiply three- and four-digit numbers by one-digit numbers  
applying the standard algorithm.  
8/28/13

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3.C.35

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Solve using each method.

Partial Products	Standard Algorithm
a) $\begin{array}{r} 46 \\ \times 2 \\ \hline 12 \\ + 80 \\ \hline 92 \end{array}$	$\begin{array}{r} 46 \\ \times 2 \\ \hline 92 \end{array}$

Partial Products	Standard Algorithm
b) $\begin{array}{r} 315 \\ \times 4 \\ \hline 20 \\ 40 \\ 1200 \\ \hline 1260 \end{array}$	$\begin{array}{r} 315 \\ \times 4 \\ \hline 1260 \end{array}$

2. Solve. Use the standard algorithm.

a) $\begin{array}{r} 232 \\ \times 4 \\ \hline 928 \end{array}$	b) $\begin{array}{r} 142 \\ \times 6 \\ \hline 852 \end{array}$	c) $\begin{array}{r} 314 \\ \times 7 \\ \hline 2198 \end{array}$
d) $\begin{array}{r} 440 \\ \times 3 \\ \hline 1320 \end{array}$	e) $\begin{array}{r} 507 \\ \times 8 \\ \hline 4056 \end{array}$	f) $\begin{array}{r} 384 \\ \times 9 \\ \hline 4456 \end{array}$

3. What is the product of 8 and 54?



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Lesson 9:

Date:

Multiply three- and four-digit numbers by one-digit numbers applying the standard algorithm.  
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3.C.36

4. Isabel earned 350 points while she was playing Blasting Robot. Isabel's mom earned 3 times as many points as Isabel. How many points did Isabel's mom earn?

$$\begin{array}{r} 350 \\ \times 3 \\ \hline 1,050 \end{array}$$

$$\begin{array}{r} 350 \\ \times 3 \\ \hline 0 \\ 150 \\ + 900 \\ \hline 1,050 \end{array}$$

5. To get enough money to go to on a field trip, every student in a club has to raise \$53 selling chocolate bars. There are 9 students in the club. How much money does the club need to raise to go on the field trip?

$$\begin{array}{r} \$53 \\ \times 9 \\ \hline \$477 \end{array}$$

$$\begin{array}{r} \$53 \\ \times 9 \\ \hline 27 \\ + 450 \\ \hline \$477 \end{array}$$

6. Mr. Meyers wants to order 4 tablets for his classroom. Each tablet costs \$329. How much will all four tablets cost?

$$\begin{array}{r} \$329 \\ \times 4 \\ \hline \$1,316 \end{array}$$

$$\begin{array}{r} \$329 \\ \times 4 \\ \hline 36 \\ 80 \\ + 1200 \\ \hline \$1,316 \end{array}$$

7. Amaya read 64 pages last week. Amaya's older brother, Rogelio, read twice as many pages in the same amount of time. Their big sister, Elianna, is in high school and read 4 times as many pages as Rogelio did. How many pages did Elianna read last week?

Elianna read 512 pages last week.

$$\begin{array}{r} 64 \\ \times 2 \\ \hline 128 \text{ pgs Rogelio} \end{array}$$

$$\begin{array}{r} 128 \\ \times 4 \\ \hline 512 \text{ pgs Elianna} \end{array}$$

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Solve using the standard algorithm.

a. $3 \times 42$ $\begin{array}{r} 42 \\ \times 3 \\ \hline 126 \end{array}$	b. $6 \times 42$ $\begin{array}{r} 42 \\ \times 6 \\ \hline 252 \end{array}$
c. $6 \times 431$ $\begin{array}{r} 431 \\ \times 6 \\ \hline 2586 \end{array}$	d. $3 \times 431$ $\begin{array}{r} 431 \\ \times 3 \\ \hline 1293 \end{array}$
e. $3 \times 6,212$ $\begin{array}{r} 6,212 \\ \times 3 \\ \hline 18,636 \end{array}$	f. $3 \times 3,106$ $\begin{array}{r} 3,106 \\ \times 3 \\ \hline 9,318 \end{array}$
g. $4 \times 4,309$ $\begin{array}{r} 4,309 \\ \times 4 \\ \hline 17,236 \end{array}$	h. $4 \times 8,618$ $\begin{array}{r} 8,618 \\ \times 4 \\ \hline 34,472 \end{array}$

COMMON  
CORE

Lesson 10:

Date:

Multiply three- and four-digit numbers by one-digit numbers  
applying the standard algorithm.  
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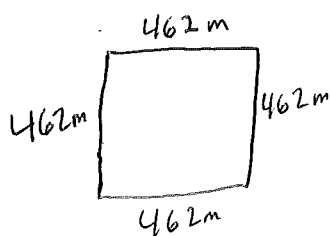
3.C.43

2. There are 365 days in a common year. How many days are in 3 common years?

$$\begin{array}{r} 365 \\ \times 3 \\ \hline 1095 \end{array}$$

There are 1,095 days in 3 common years.

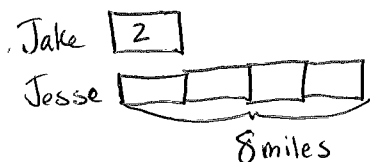
3. The length of one side of a square city block is 462 meters. What is the perimeter of the block?



$$\begin{array}{r} 462 \\ \times 4 \\ \hline 1848 \end{array}$$

The perimeter <sup>of the block</sup> is 1,848 meters.

4. Jake ran 2 miles. Jesse ran 4 times as far. There are 5,280 feet in a mile. How many feet did Jesse run?



$$\begin{array}{r} 5,280 \\ \times 8 \\ \hline 42,240 \end{array}$$

Jesse runs 42,240 feet



Name \_\_\_\_\_

Date \_\_\_\_\_

1. Solve using the standard algorithm.

a.  $2,348 \times 6$

$$\begin{array}{r} 2,348 \\ \times 6 \\ \hline 18,088 \end{array}$$

b.  $1,679 \times 7$

$$\begin{array}{r} 1,679 \\ \times 7 \\ \hline 11,753 \end{array}$$

2. A farmer planted 4 rows of sunflowers. There were 1,205 plants in each row. How many sunflowers did he plant?

$$\begin{array}{r} 1205 \\ \times 4 \\ \hline 4820 \end{array}$$

He planted 4,820 sunflowers.

Name \_\_\_\_\_

Date \_\_\_\_\_

1. Solve using the standard algorithm.

a.  $3 \times 41$

$$\begin{array}{r} 41 \\ \times 3 \\ \hline 123 \end{array}$$

b.  $9 \times 41$

$$\begin{array}{r} 41 \\ \times 9 \\ \hline 369 \end{array}$$

c.  $7 \times 143$

$$\begin{array}{r} 143 \\ \times 7 \\ \hline 1,001 \end{array}$$

d.  $7 \times 286$

$$\begin{array}{r} 286 \\ \times 7 \\ \hline 2,002 \end{array}$$

e.  $4 \times 2,048$

$$\begin{array}{r} 2,048 \\ \times 4 \\ \hline 8,192 \end{array}$$

f.  $4 \times 4,096$

$$\begin{array}{r} 4,096 \\ \times 4 \\ \hline 16,384 \end{array}$$

g.  $8 \times 4,096$

$$\begin{array}{r} 4,096 \\ \times 8 \\ \hline 32,768 \end{array}$$

h.  $4 \times 8,192$

$$\begin{array}{r} 8,192 \\ \times 4 \\ \hline 32,768 \end{array}$$

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Lesson 10:

Date:

Multiply three- and four-digit numbers by one-digit numbers  
applying the standard algorithm.  
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3.C.46

2. One gallon of water contains 128 fluid ounces. Robert's family brings six gallons of water for the players on the football team. How many fluid ounces are in six gallons?

$$\begin{array}{r} 128 \\ \times 6 \\ \hline 768 \end{array}$$

There are 768 fluid ounces  
in six gallons.

3. It takes 687 Earth days for the planet Mars to revolve around the Sun once. How many Earth days does it take Mars to revolve around the Sun four times?

$$\begin{array}{r} 687 \\ \times 4 \\ \hline 2,748 \end{array}$$

It takes Mars 2,748 Earth  
days to revolve around the  
Sun four times.

4. Tammy buys a 4-gigabyte memory card for her camera. Dijonea buys a memory card with twice as much storage as Tammy's. One gigabyte is 1,024 megabytes. How many megabytes of storage does Dijonea have on her memory card?



COMMON  
CORE

Lesson 10:

Date:

Multiply three- and four-digit numbers by one-digit numbers  
applying the standard algorithm.  
8/28/13

engage<sup>ny</sup>

3.C.47

Name Charlie Buckaroo

Date \_\_\_\_\_

1. Solve the following expressions using the standard algorithm, the partial products method, and the area model.

a.  $425 \times 4$

$$\begin{array}{r} 425 \\ \times 4 \\ \hline 1700 \end{array}$$

	400	20	5
4	1600	80	20

$4(400 + 20 + 5)$

$(4 \times 400) + (4 \times 20) + (4 \times 5)$

b.  $534 \times 7$

$$\begin{array}{r} 534 \\ \times 7 \\ \hline 3738 \end{array}$$

	500	30	4
7	3500	210	28

$7(500 + 30 + 4)$

$(7 \times 500) + (7 \times 30) + (7 \times 4)$

c.  $209 \times 8$

$$\begin{array}{r} 209 \\ \times 8 \\ \hline 1672 \end{array}$$

	200	9
8	1600	72

$8(200 + 9)$

$(8 \times 200) + (8 \times 9)$

COMMON  
CORE

Lesson 11:

Date:

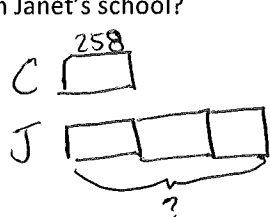
Connect the area model and the partial products method to the standard algorithm.  
8/28/13

engage<sup>ny</sup>

3.C.54

2. Solve using the partial products method.

Cayla's school has 258 students. Janet's school has 3 times as many students as Cayla's. How many students are in Janet's school?



$$\begin{array}{r} 258 \\ \times 3 \\ \hline 774 \end{array}$$

There are 774  
Students in Janet's  
School.

3. Model with a tape diagram and solve.

4 times as much as 467.



$$\begin{array}{r} 467 \\ \times 4 \\ \hline 1868 \end{array}$$

Solve using the standard algorithm, the area model, the distributive property, or the partial products method.

4.  $5,131 \times 7$

$$\begin{array}{r} 5131 \\ \times 7 \\ \hline 35917 \end{array}$$

5. 3 times as many as 2,805.

$$\begin{array}{r} 2805 \\ \times 3 \\ \hline 8415 \end{array}$$

6. A restaurant sells 1,725 pounds of spaghetti and 925 pounds of linguini every month. After 9 months, how many pounds of pasta does the restaurant sell? Write your answer as a statement.

$$\begin{array}{r} 1725 \\ + 925 \\ \hline 2650 \end{array}$$

	2,000	600	50
9	18,000	5,400	450

$(9 \times 2,000) + (9 \times 600) + (9 \times 50)$   
 $18,000 + 5,400 + 450 = 23,850$

The restaurant sells  
23,850 pounds of  
pasta in 9 months.



COMMON  
CORE

Lesson 11:

Date:

Connect the area model and the partial products method to the standard algorithm.  
8/28/13

engage<sup>ny</sup>

3.C.55

Name Charlie

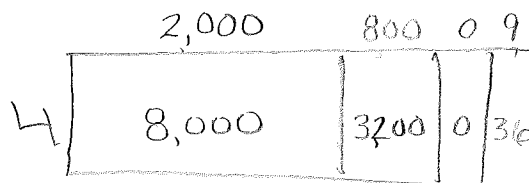
Date \_\_\_\_\_

1. Solve using the standard-algorithm, the area model, the distributive property, or the partial products method.

$$2,809 \times 4$$

$$\begin{array}{r} 2,809 \\ \times 4 \\ \hline 11,236 \end{array}$$

$$\begin{array}{r} 2,809 \\ \times 4 \\ \hline 36 \\ 00 \\ 3,200 \\ 8,000 \\ \hline 11,236 \end{array}$$

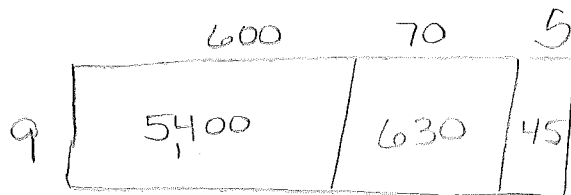


$$4(2,000 + 800 + 9) \\ (4 \times 2,000) + (4 \times 800) + (4 \times 9)$$

2. The monthly school newspaper is 9 pages long. Mrs. Smith needs to print 675 copies. How many sheets of paper will she use?

$$\begin{array}{r} 675 \\ \times 9 \\ \hline 6,075 \end{array}$$

$$\begin{array}{r} 675 \\ \times 9 \\ \hline 45 \\ 630 \\ 5,400 \\ \hline 6,075 \end{array}$$



$$9(600 + 70 + 5) \\ (9 \times 600) + (9 \times 70) + (9 \times 5)$$

Name Charlie Bockaroo

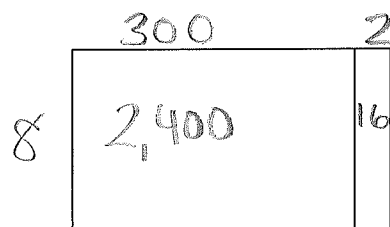
Date \_\_\_\_\_

1. Solve the following expressions using the standard algorithm, the partial products method, and the area model.

a.  $302 \times 8$

$$\begin{array}{r} 302 \\ \times 8 \\ \hline 16 \\ 2400 \\ \hline 2416 \end{array}$$

$$\begin{array}{r} 302 \\ \times 8 \\ \hline 2416 \end{array}$$



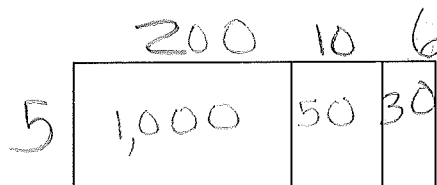
$$8(300 + 2)$$

$$(8 \times 300) + (8 \times 2)$$

b.  $216 \times 5$

$$\begin{array}{r} 216 \\ \times 5 \\ \hline 30 \\ 1000 \\ \hline 1080 \end{array}$$

$$\begin{array}{r} 216 \\ \times 5 \\ \hline 1080 \end{array}$$



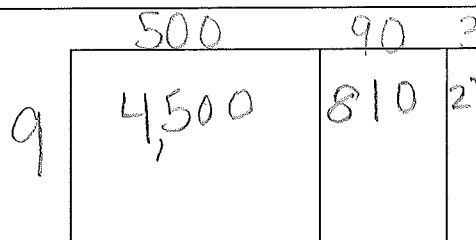
$$5(200 + 10 + 6)$$

$$(5 \times 200) + (5 \times 10) + (5 \times 6)$$

c.  $593 \times 9$

$$\begin{array}{r} 593 \\ \times 9 \\ \hline 27 \\ 4810 \\ \hline 5337 \end{array}$$

$$\begin{array}{r} 593 \\ \times 9 \\ \hline 5337 \end{array}$$



$$9(500 + 90 + 3)$$

$$(9 \times 500) + (9 \times 90) + (9 \times 3)$$

2. Solve using the partial products method.

On Monday 475 people visited the museum. On Saturday there were 4 times as many visitors as there were on Monday. How many people visited the museum on Saturday?

$$\begin{array}{r} 475 \\ \times 4 \\ \hline 1900 \end{array}$$

1,900 people

3. Model with a tape diagram and solve.

6 times as much as 384.

384	384	384	384	384	384
-----	-----	-----	-----	-----	-----

$$\begin{array}{r} 384 \\ \times 6 \\ \hline 2304 \end{array}$$

Solve using the standard algorithm, the area model, the distributive property, or the partial products method.

4.  $6,253 \times 3$

6000	200	50	3
18,000	600	150	9

$$\begin{aligned} & 3(6000 + 200 + 50 + 3) \\ & (3 \times 6000) + (3 \times 200) + (3 \times 50) + (3 \times 3) \\ & 18,000 + 600 + 150 + 9 \end{aligned}$$

5. 7 times as many as 3,073.

3,073	3,073	3,073	3,073	3,073	3,073
-------	-------	-------	-------	-------	-------

$$\begin{array}{r} 3,073 \\ \times 7 \\ \hline 21,511 \end{array}$$

$$\begin{array}{r} 21,511 \\ 3,073 \times 7 \end{array}$$

6. A cafeteria makes 2,516 pounds of white rice and 608 pounds of brown rice every month. After 6 months, how many pounds of rice does the cafeteria make? Write your answer as a statement.

$$\begin{array}{r} 2,516 \\ + 608 \\ \hline 3,124 \end{array}$$

$$\begin{array}{r} 3,124 \\ \times 6 \\ \hline 18,744 \end{array}$$

The cafeteria makes 18,744 pounds of rice.

