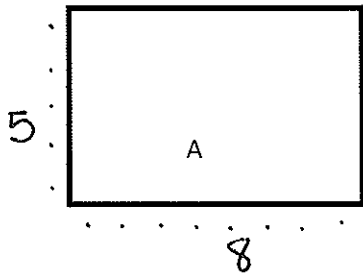
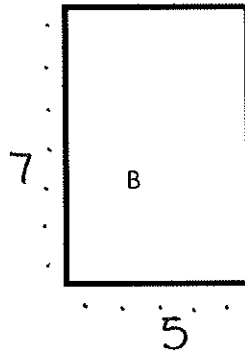


Name Key Date _____

1. Determine the perimeter and area of rectangles A and B. Include labels.

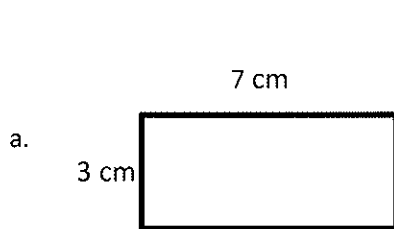


$A = \underline{40 \text{ sq. units}}$
 $P = \underline{26 \text{ units}}$



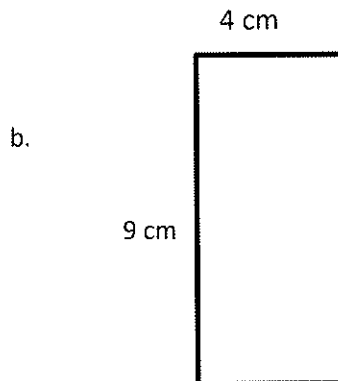
$A = \underline{35 \text{ sq. units}}$
 $P = \underline{24 \text{ units}}$

2. Determine the perimeter and area of each rectangle. Include labels.



$P = \underline{20 \text{ cm}}$

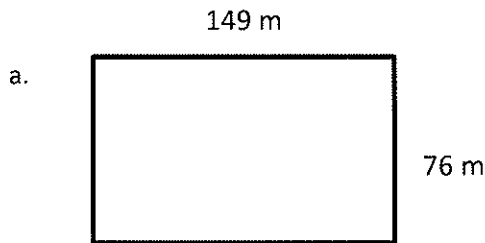
$A = \underline{21 \text{ sq. cm}}$



$P = \underline{26 \text{ cm}}$

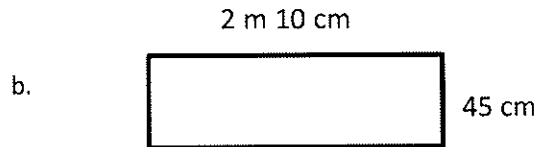
$A = \underline{36 \text{ sq. cm}}$

3. Determine the perimeter of each rectangle. Include labels.



$P = \underline{450\text{ m}}$

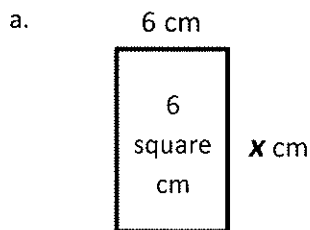
$$\begin{array}{r} 149 \\ + 76 \\ \hline 225 \end{array} \quad \begin{array}{r} 225 \\ + 225 \\ \hline 450 \end{array}$$



$P = \underline{5\text{ m } 10\text{ cm}}$

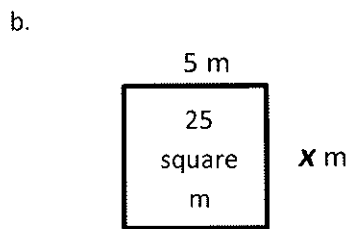
$$\begin{array}{r} 2\text{ m } 10\text{ cm} \\ + 45\text{ cm} \\ \hline 2\text{ m } 55\text{ cm} \end{array} \quad \begin{array}{r} 2\text{ m } 55\text{ cm} \\ + 2\text{ m } 55\text{ cm} \\ \hline 4\text{ m } 110\text{ cm} \\ 5\text{ m } 10\text{ cm} \end{array}$$

4. Given the rectangle's area, find the unknown side length. Include labels.



$x = \underline{6\text{ cm}}$

$6 \times \underline{\quad} = 6\text{ sq. cm}$

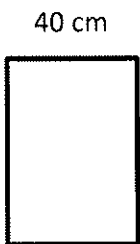


$x = \underline{5\text{ m}}$

$5 \times \underline{\quad} = 25\text{ sq. m}$

5. Given the rectangle's perimeter, find the unknown side length. Include labels.


a. $P = 180$ cm



$180 - (40 + 40) = 100$
 $100 \div 2 = 50$

$x = \underline{50 \text{ cm}}$

b. $P = 1,000$ m

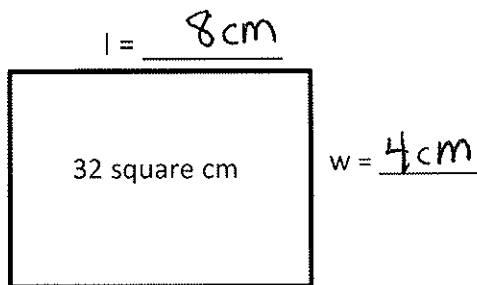


$1,000 - (150 + 150) = 700$
 $700 \div 2 = 350$

$x = \underline{350 \text{ m}}$

6. Each of the following rectangles has whole number side lengths. Given the area and perimeter, find the length and width. Include labels.

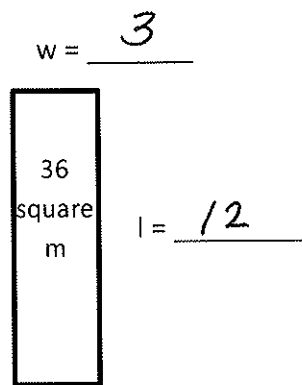
a. $A = 32$ square cm
 $P = 24$ cm



$L \times W = 32$
 $4 \times 8 = 32$

$L + L + W + W = 24$
 $4 + 4 + 8 + 8 = 24$

b. $A = 36$ square m
 $P = 30$ m



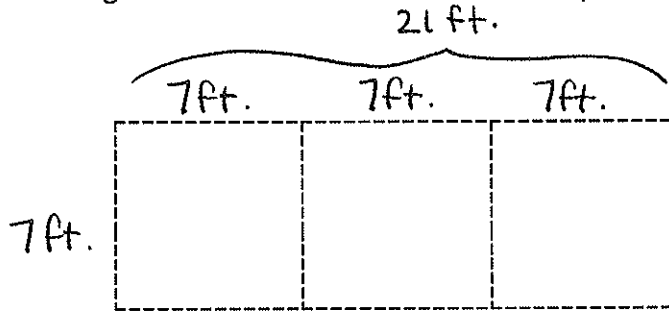
$L \times W = 36$
 $3 \times 12 = 36$

$L + L + W + W = 30$
 $3 + 3 + 12 + 12 = 30$

Name Key Date _____

1. A rectangular pool is 7 feet wide. It is 3 times as long as it is wide.

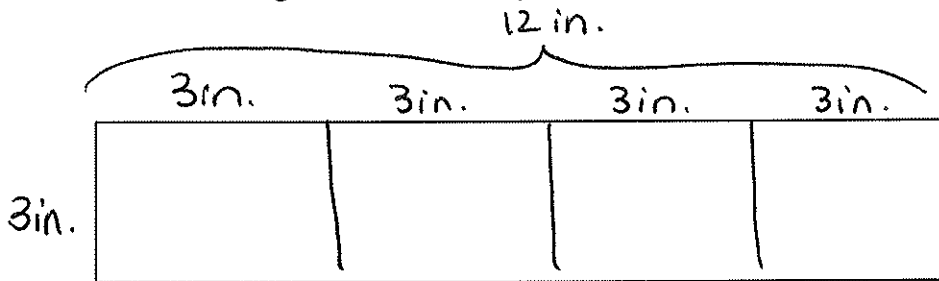
a. Label the diagram with the dimensions of the pool.



b. Find the perimeter of the pool. $P = \underline{56 \text{ ft.}}$

2. A rectangular bumper sticker is 3 inches long. It is 4 times as wide as it is long.

a. Draw a diagram of the bumper sticker and label its dimensions.

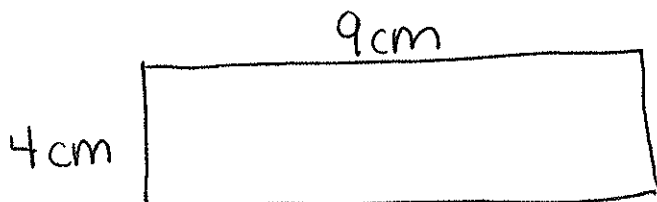


b. Find the perimeter and area of the bumper sticker. $P = \underline{30 \text{ in.}}$ $A = \underline{36 \text{ sq. in.}}$

$$15 + 15 = 30$$

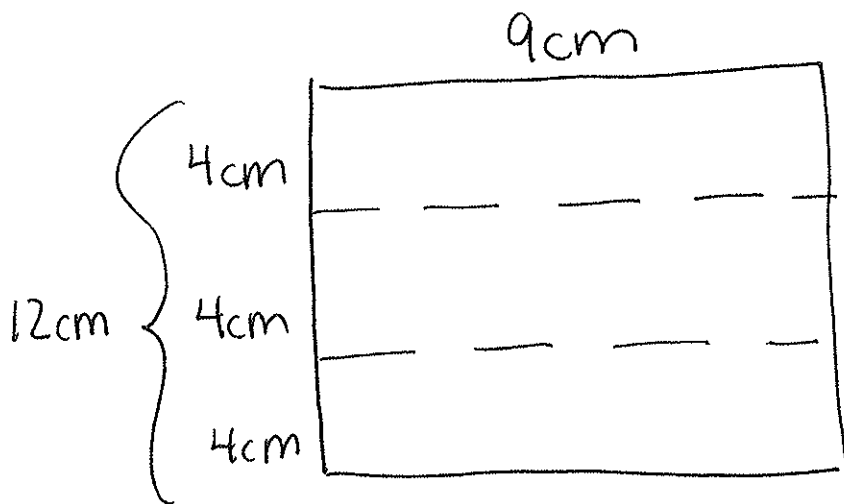
$$3 \times 12 = 36$$

3. The area of a rectangle is 36 square centimeters and its length is 9 centimeters.
Draw and label this rectangle.



a. What is the width of the rectangle? $W = \underline{4\text{ cm}}$

- b. Elsa wants to draw a second rectangle that is the same length but is 3 times as wide. Draw and label Elsa's second rectangle.



c. What is the perimeter of Elsa's second rectangle? $P = \underline{42\text{ cm}}$

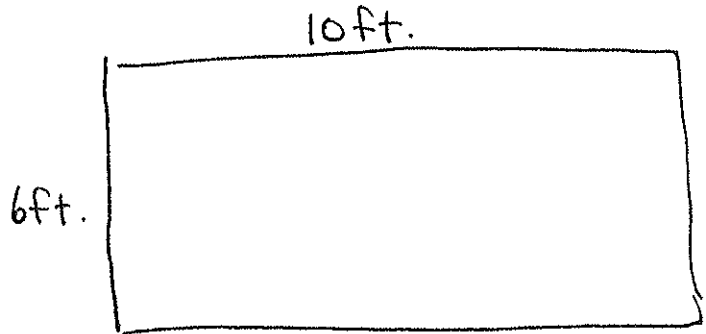
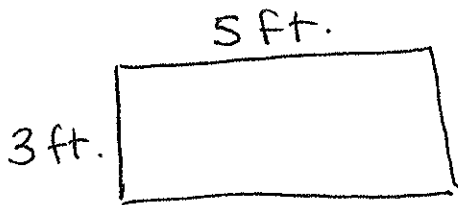
$$12 + 9 = 21$$

$$21 \times 2 = 42$$

4. The area of Nathan’s bedroom rug is 15 square feet. The longer side measures 5 feet. His living room rug is twice as long and twice as wide as the bedroom rug.

a. Draw and label a diagram of Nathan’s bedroom rug. What is its perimeter? $P = 16 \text{ ft.}$

b. Draw and label a diagram of Nathan’s living room rug. What is its perimeter? $P = 32 \text{ ft.}$



c. What is the relationship between the two perimeters?

The living room rug's perimeter is twice as big as the bedroom rug's.

d. Find the area of the living room rug using the formula $A = l \times w$.

$A = \underline{60 \text{ sq. ft.}}$

e. The living room rug has an area that is how many times that of the bedroom rug?

The area of the living room rug is 4 times the area of the bedroom rug.

Name Key

Date _____

Example:

$5 \times 10 = \underline{50}$

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

thousands	hundreds	tens	ones

1. Draw number disks and arrows as shown to represent each product.

thousands	hundreds	tens	ones

a. $7 \times 100 = \underline{700}$

$7 \times 10 \times 10 = \underline{700}$

$7 \text{ ones} \times 100 = \underline{7 \text{ hundreds}}$

thousands	hundreds	tens	ones

b. $7 \times 1,000 = \underline{7,000}$

$7 \times 10 \times 10 \times 10 = \underline{7,000}$

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

thousands	hundreds	tens	ones

2. Complete the following equations. Use the place value chart if needed.

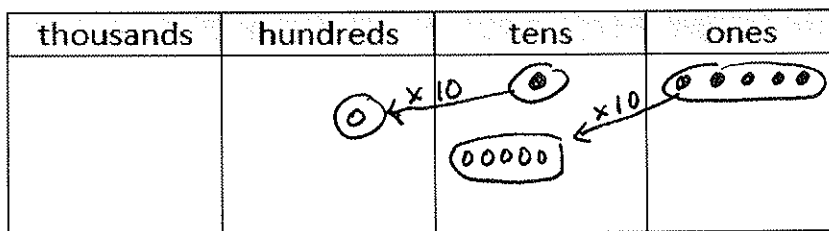
a. $8 \times 10 = \underline{80}$ b. $\underline{100} \times 8 = 800$ c. $8,000 = \underline{8} \times 1,000$

d. $10 \times 3 = \underline{30}$ e. $3 \times \underline{1000} = 3,000$ f. $\underline{100} \times 3 = 300$

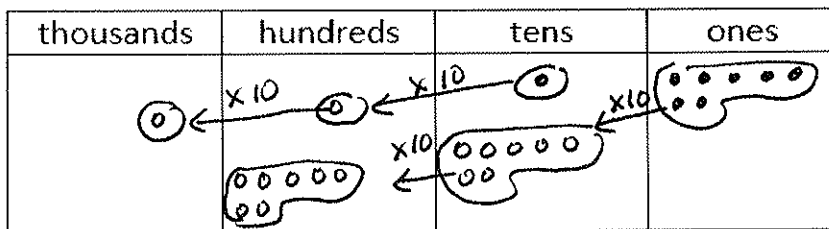
g. $1,000 \times 4 = \underline{4000}$ h. $\underline{40} = 10 \times 4$ i. $400 = \underline{4} \times 100$

3. Draw number disks and arrows as shown to represent each product.

a. $15 \times 10 = \underline{150}$ (1 ten 5 ones) $\times 10 = \underline{150}$

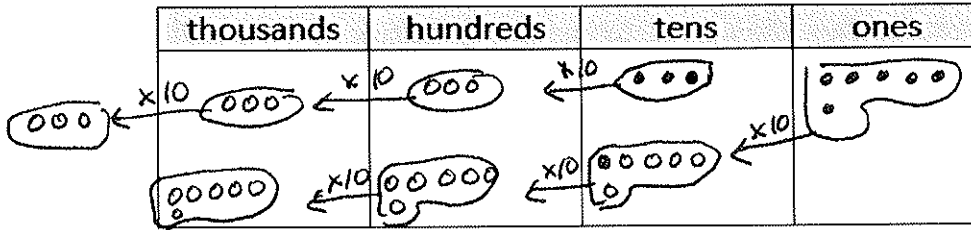


b. $17 \times 100 = \underline{1,700}$ $17 \times 10 \times 10 = \underline{1,700}$



c. $36 \times 1,000 = \underline{36,000}$

$36 \times 10 \times 10 \times 10 = \underline{36,000}$



4. Decompose each multiple of 100, or 1,000 before multiplying.

a. $2 \times 800 = 2 \times 8 \times \underline{10} \times \underline{10}$
 $= 16 \times \underline{100}$
 $= \underline{1,600}$

b. $5 \times 5,000 = \underline{5} \times \underline{5} \times 10 \times 10 \times 10$
 $= \underline{25} \times \underline{1000}$
 $= \underline{25,000}$

Name Key

Date _____

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

1. $5 \times 2 = \underline{10}$

5 times 2 ones is 10 ones.

ones
• •
• •
• •
• •
• •

2. $5 \times 20 = \underline{100}$

5 times 2 tens is 10 tens.

tens	ones
• •	
• •	
• •	
• •	
• •	

3. $5 \times 200 = \underline{1000}$

5 times 2 hundreds is 10 hundreds.

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

4. $5 \times 2,000 = \underline{10,000}$

5 times 2 thousands is 10 thousands.

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

5. Find the products.

a. $20 \times 9 =$ 180	b. $6 \times 70 =$ 420	c. $7 \times 700 =$ 4,900	d. $3 \times 900 =$ 2,700
e. $9 \times 90 =$ 810	f. $40 \times 7 =$ 280	g. $600 \times 6 =$ 3,600	h. $8 \times 6,000 =$ 48,000
i. $5 \times 70 =$ 350	j. $5 \times 80 =$ 400	k. $5 \times 200 =$ 1,000	l. $6,000 \times 5 =$ 30,000

6. At the school cafeteria, each student who ordered lunch gets 6 chicken nuggets. The cafeteria staff prepares enough for 300 kids. How many chicken nuggets does the cafeteria staff prepare altogether? $300 \times 6 = 1,800$

The cafeteria prepares 1,800 chicken nuggets.

7. Jane has thirty times as many stickers as her brother. Her brother has 8 stickers. How many stickers does Jane have? $30 \times 8 = 240$

Jane has 240 stickers.

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?

$$40 \times \underline{3} = 120$$

There are 3 flowers in Julia's bouquet.

Name Key

Date _____

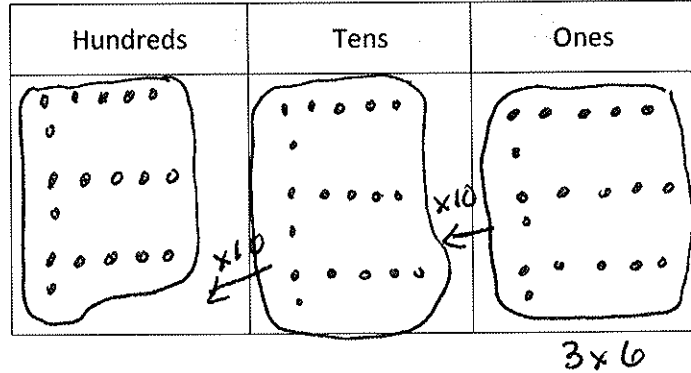
Represent the following problem by drawing disks in the place value chart.

1. To solve 30×60 , think:

$(3 \text{ tens}) \times (6 \text{ tens}) =$

$3 \times 6 \times 10 \times 10 =$

$30 \times 60 = \underline{1,800}$



2. Use the word form of the numbers to find the products.

a. $3 \text{ tens} \times 6 \text{ tens} = \underline{18} \text{ hundreds}$

$30 \times 60 = \underline{1,800}$

b. $2 \text{ tens} \times 2 \text{ tens} = \underline{4} \text{ hundreds}$

$20 \times 20 = \underline{400}$

c. $3 \text{ tens} \times 5 \text{ tens} = \underline{15} \text{ hundreds}$

$30 \times 50 = \underline{1,500}$

d. $7 \text{ tens} \times 6 \text{ tens} = \underline{42} \text{ hundreds}$

$70 \times 60 = \underline{4,200}$

e. $6 \text{ tens} \times 4 \text{ tens} = \underline{24} \text{ hundreds}$

$60 \times 40 = \underline{2,400}$

3. Rewrite each equation in unit form and solve.

a. $40 \times 70 = \underline{2,800}$

4 tens \times 7 tens = 28 hundreds

b. $60 \times 60 = \underline{3,600}$

6 tens \times 6 tens = 36 hundreds

c. $80 \times 20 = \underline{1,600}$

8 tens \times 2 tens = 16 hundreds

d. $70 \times 70 = \underline{4,900}$

7 tens \times 7 tens = 49 hundreds

e. $40 \times 90 = \underline{3,600}$

4 tens \times 9 tens = 36 hundreds

f. $30 \times 70 = \underline{2,100}$

3 tens \times 7 tens = 21 hundreds

Name Key

Date _____

1. Show partial products with disks on the place value chart, and record the partial products vertically.

a. 3×24

hundreds	tens	ones
	●	●●

	●●●●●	

$$\begin{array}{r}
 24 \\
 \times 3 \\
 \hline
 12 \quad (3 \times 4) \\
 + 60 \quad (3 \times 20) \\
 \hline
 72
 \end{array}$$

b. 3×42

hundreds	tens	ones
		●● ●● ●●

●	●●	

$$\begin{array}{r}
 42 \\
 \times 3 \\
 \hline
 6 \quad (3 \times 2) \\
 + 120 \quad (3 \times 40) \\
 \hline
 126
 \end{array}$$

c. 4×34

hundreds	tens	ones
	●	●●●●●

●	●●	

$$\begin{array}{r}
 34 \\
 \times 4 \\
 \hline
 16 \quad (4 \times 4) \\
 + 120 \quad (4 \times 30) \\
 \hline
 136
 \end{array}$$

d. 4×27

hundreds	tens	ones

$$\begin{array}{r}
 27 \\
 \times 4 \\
 \hline
 28 \quad (4 \times 7) \\
 + 80 \quad (4 \times 20) \\
 \hline
 108
 \end{array}$$

e. 5×42

hundreds	tens	ones

$$\begin{array}{r}
 42 \\
 \times 5 \\
 \hline
 10 \quad (5 \times 2) \\
 + 200 \quad (5 \times 40) \\
 \hline
 210
 \end{array}$$

2. When Cindy multiplied 3×24 , she said, “ 3×4 is 12 ones. Then there’s just 2 tens left in 24, so add it to the 12 ones and you get 32 for the answer.” Do you think Cindy’s shortcut works? Explain your thinking in words and justify your response using a model or partial products.

Cindy is wrong. Instead of just adding the 20, you have to take 3 times 20 and add it to the 12. The correct answer is 72.

$$\begin{array}{r}
 24 \\
 \times 3 \\
 \hline
 12 \quad (3 \times 4) \\
 + 60 \quad (3 \times 20) \\
 \hline
 72
 \end{array}$$

Name Key

Date _____

1. Represent the following expressions with disks that match the partial products.

a. 1×424

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

$$\begin{array}{r}
 424 \\
 \times \quad 1 \\
 \hline
 4 \quad (1 \times 4) \\
 20 \quad (1 \times 20) \\
 400 \quad (1 \times 400) \\
 \hline
 424
 \end{array}$$

b. 3×424

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

$$\begin{array}{r}
 424 \\
 \times \quad 3 \\
 \hline
 12 \quad (3 \times 4) \\
 60 \quad (3 \times 20) \\
 + 1200 \quad (3 \times 400) \\
 \hline
 1272
 \end{array}$$

c. $4 \times 1,424$

thousands	hundreds	tens	ones

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

d. 2×617

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

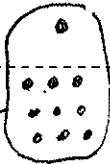
$$\begin{array}{r}
 617 \\
 \times \quad 2 \\
 \hline
 14 \quad (2 \times 7) \\
 20 \quad (2 \times 10) \\
 + 1200 \quad (2 \times 600) \\
 \hline
 1,234
 \end{array}$$

e. 5×642

thousands	hundreds	tens	ones
		•	
	••		
•••			

$$\begin{array}{r}
 642 \\
 \times \quad 5 \\
 \hline
 10 \quad (5 \times 2) \\
 200 \quad (5 \times 40) \\
 + 3000 \quad (5 \times 600) \\
 \hline
 3,210
 \end{array}$$

f. $3 \times 3,034$

thousands	hundreds	tens	ones
			••
	•		
•••			

$$\begin{array}{r}
 3034 \\
 \times \quad 3 \\
 \hline
 12 \quad (3 \times 4) \\
 90 \quad (3 \times 30) \\
 0 \quad (3 \times 0) \\
 + 9000 \quad (3 \times 3000) \\
 \hline
 9102
 \end{array}$$

Name Key

Date _____

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

a. 8×312

$\begin{array}{r} 312 \\ \times 8 \\ \hline 16 \\ 80 \\ \hline 2400 \\ \hline 2,496 \end{array}$	8	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center; padding: 5px;">300</td> <td style="width: 33%; text-align: center; padding: 5px;">10</td> <td style="width: 33%; text-align: center; padding: 5px;">2</td> </tr> <tr> <td style="border: 1px solid black; text-align: center; padding: 10px;">2400</td> <td style="border: 1px solid black; text-align: center; padding: 10px;">80</td> <td style="border: 1px solid black; text-align: center; padding: 10px;">16</td> </tr> </table>	300	10	2	2400	80	16
300	10	2						
2400	80	16						

b. 216×5

$\begin{array}{r} 216 \\ \times 5 \\ \hline 30 \\ 50 \\ \hline 1000 \\ \hline 1,080 \end{array}$	5	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center; padding: 5px;">200</td> <td style="width: 33%; text-align: center; padding: 5px;">10</td> <td style="width: 33%; text-align: center; padding: 5px;">6</td> </tr> <tr> <td style="border: 1px solid black; text-align: center; padding: 10px;">1000</td> <td style="border: 1px solid black; text-align: center; padding: 10px;">50</td> <td style="border: 1px solid black; text-align: center; padding: 10px;">30</td> </tr> </table>	200	10	6	1000	50	30
200	10	6						
1000	50	30						

c. 593×9

$\begin{array}{r} 593 \\ \times 9 \\ \hline 27 \\ 810 \\ \hline 4500 \\ \hline 5,337 \end{array}$	9	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; text-align: center; padding: 5px;">500</td> <td style="width: 33%; text-align: center; padding: 5px;">90</td> <td style="width: 33%; text-align: center; padding: 5px;">3</td> </tr> <tr> <td style="border: 1px solid black; text-align: center; padding: 10px;">4500</td> <td style="border: 1px solid black; text-align: center; padding: 10px;">810</td> <td style="border: 1px solid black; text-align: center; padding: 10px;">27</td> </tr> </table>	500	90	3	4500	810	27
500	90	3						
4500	810	27						

2. Solve using the partial products and area model methods.

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?

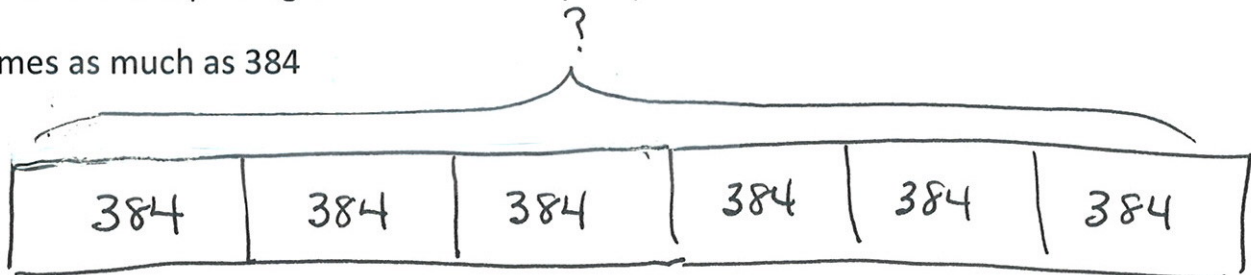
$$\begin{array}{r}
 475 \\
 \times 4 \\
 \hline
 20 \\
 280 \\
 1600 \\
 \hline
 1,900
 \end{array}$$

	400	70	5
4	1600	280	20

There were 1,900 visitors to the museum on Saturday.

3. Model with a tape diagram and solve any way.

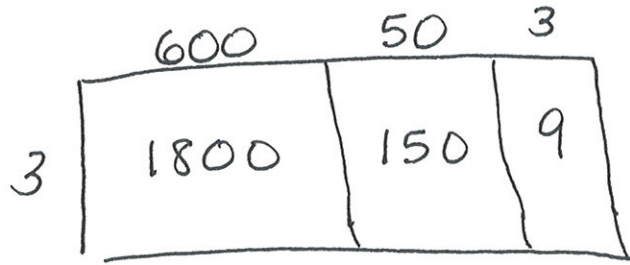
6 times as much as 384



$$\begin{array}{r}
 384 \\
 \times 6 \\
 \hline
 24 \\
 480 \\
 1,800 \\
 \hline
 2,304
 \end{array}$$

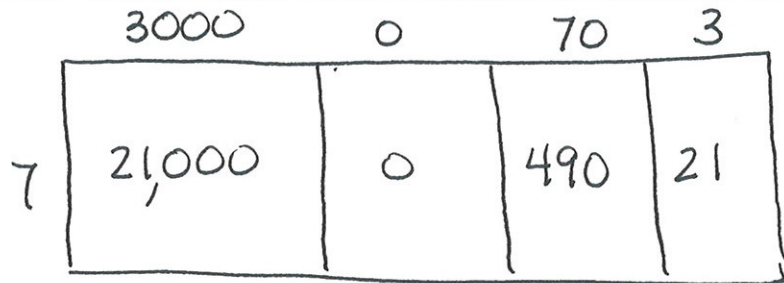
Solve any way.

$$\begin{array}{r}
 4. \quad 653 \times 3 \\
 \quad 653 \\
 \quad \times 3 \\
 \hline
 \quad \quad 9 \\
 \quad 150 \\
 1800 \\
 \hline
 1959
 \end{array}$$



5. 7 times as many as 3,073.

$$\begin{array}{r}
 3073 \\
 \times 7 \\
 \hline
 21 \\
 490 \\
 \quad 0 \\
 21000 \\
 \hline
 21511
 \end{array}$$



6. A cafeteria makes 616 pounds of white rice and 508 pounds of brown rice every month. After 6 months, how many pounds of rice does the cafeteria make? Write your answer as a statement.

$$\begin{array}{r}
 616 \\
 \times 6 \\
 \hline
 36 \\
 60 \\
 3600 \\
 \hline
 3696 \\
 \text{white} \\
 \text{rice}
 \end{array}$$

$$\begin{array}{r}
 508 \\
 \times 6 \\
 \hline
 48 \\
 \quad 0 \\
 3000 \\
 \hline
 3048 \\
 \text{brown} \\
 \text{rice}
 \end{array}$$

$$\begin{array}{r}
 3696 \\
 + 3048 \\
 \hline
 6744
 \end{array}$$

The cafeteria makes 6,744 pounds of rice in 6 months.

Name Key

HOMework

1. The table shows the number of stickers of various types in Chrissy's new sticker book. Chrissy's four friends also own the same sticker book. How many stickers do Chrissy and her four friends have altogether?

Chrissy 92

Type of Sticker	Number of Stickers
flowers	32
smiley faces	21
hearts	39
	92

Friends 92 | 92 | 92 | 92

$$\begin{array}{r} 92 \\ \times 5 \\ \hline 10 \\ 450 \\ \hline 460 \end{array}$$

Chrissy and her friends have a total of 460 stickers.

2. The small copier makes 437 copies each day. The large copier makes 4 times as many copies each day. How many copies does the large copier make each week?

Large Copier 1 day 1748

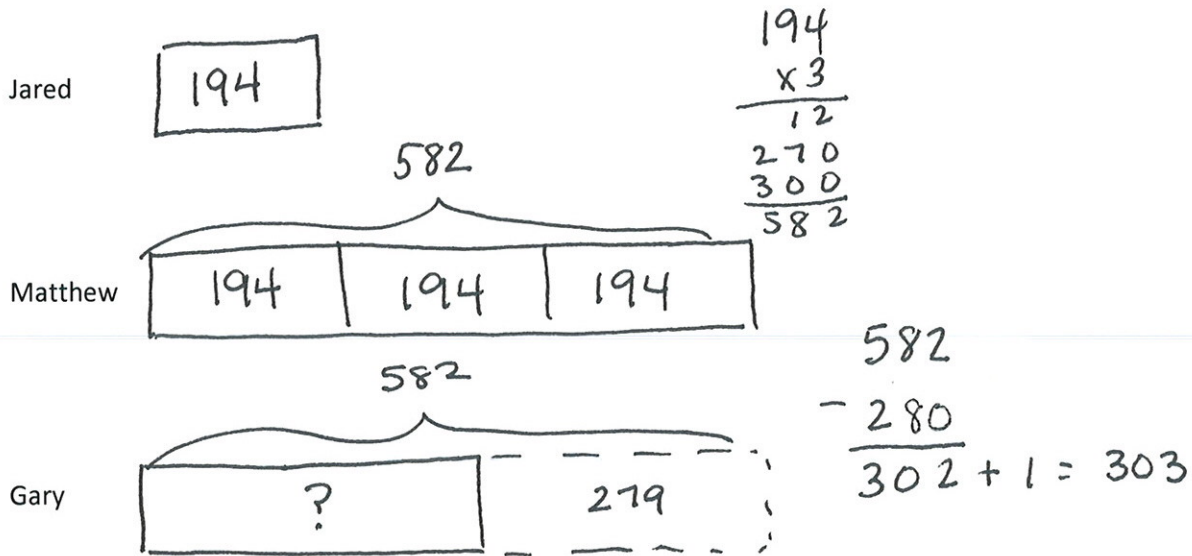
$$\begin{array}{r} 437 \\ \times 4 \\ \hline 28 \\ 120 \\ 1600 \\ \hline 1748 \end{array}$$

$$\begin{array}{r} 1748 \\ \times 7 \\ \hline 56 \\ 280 \\ 4900 \\ 7000 \\ \hline 12,236 \end{array}$$

Large Copier 1 Week 1748 | 1748 | 1748 | 1748 | 1748 | 1748 | 1748

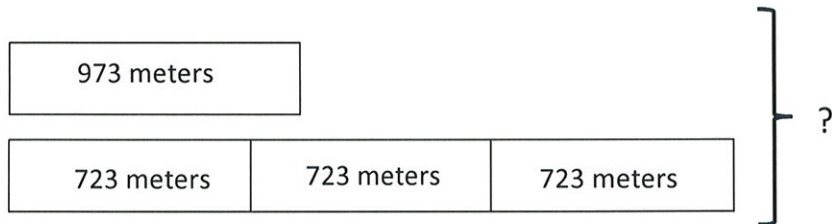
The large copier makes 12,236 copies each week.

3. Jared sold 194 Boy Scout chocolate bars. Matthew sold three times as many as Jared. Gary sold 297 fewer than Matthew. How many bars did Gary sell?



Gary sold 303 chocolate bars.

4. Write a word problem to go with this tape diagram. Include the solution.



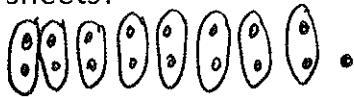
Various. $? = 3,142 \text{ m}$

Name Key

Date _____

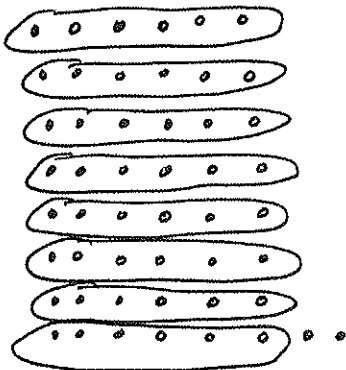
Solve the following problems using arrays.

1. Linda makes booklets using 2 sheets of paper. She has 17 sheets of paper. How many of these booklets can she make? Will she have any extra paper? How many sheets?



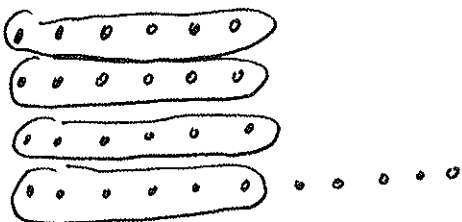
She can make 8 booklets.
She will have one sheet of paper left over.

2. Linda uses thread to sew the booklets together. She cuts 6 inches of thread for each booklet. How many booklets can she stitch with 50 inches of thread? Will she have any unused thread after stitching up the booklets? If so, how much?



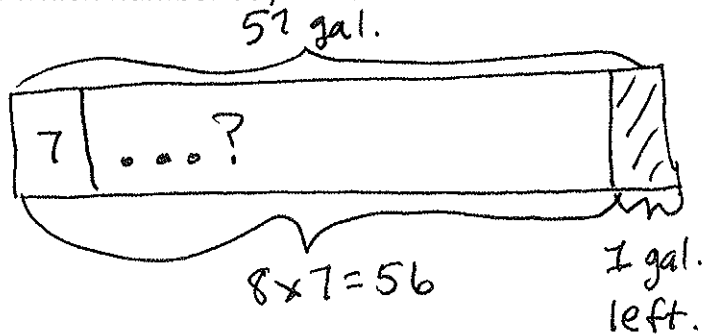
Linda will use 48 inches of thread to sew 8 booklets.
She will have 2 inches of thread left.

3. Ms. Rochelle wants to put her 29 students into groups of 6. How many groups of 6 can she make? If she puts any remaining students in a smaller group, how many students will be in that group?



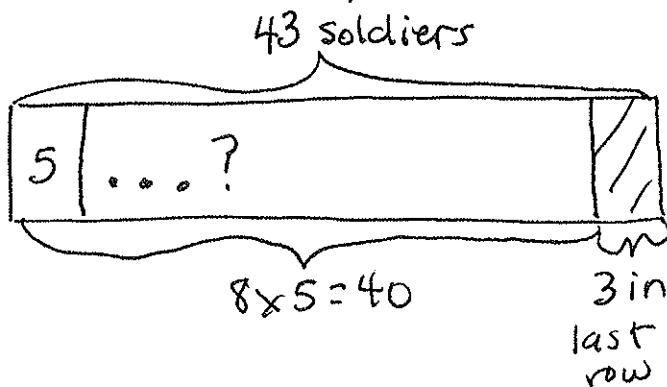
She can make 4 groups of 6.
There will be 5 students in the last group.

4. A trainer gives his horse 7 gallons of water every day from a 57-gallon container. How many days will the horse receive its full portion of water from the container? On which number day will the trainer need to refill the container of water?



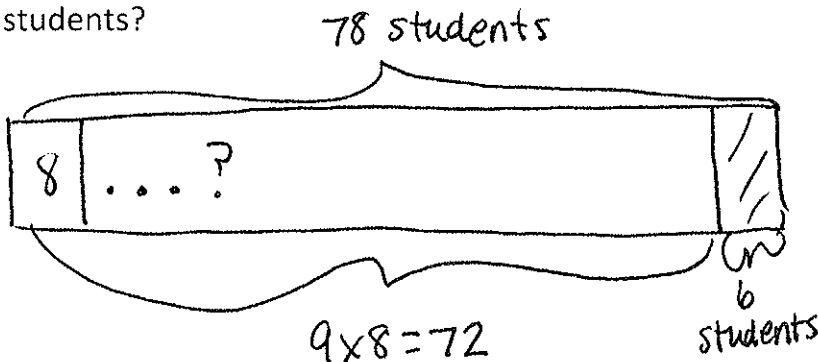
The horse will get its full amount for 8 days. On the 9th day, the trainer will need to refill the container.

5. Melissa has 43 toy soldiers. She lines them up in rows of 5 to fight imaginary zombies. How many of these rows can she make? She puts the remaining soldiers in the last row. How many soldiers are in that row?



She can make 8 rows of 5. There will be 3 soldiers in the 9th row.

6. Seventy-eight students are separated into groups of 8 for a field trip. How many groups are there? The remaining students form a smaller group of how many students?



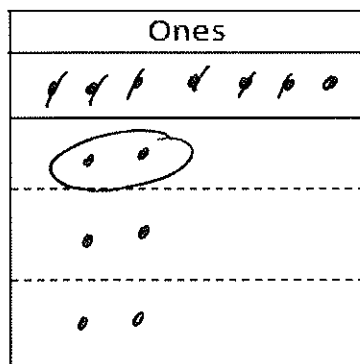
There are 9 groups of 8 and the last group will have 6 students.

Name Key

Date _____

Show the division using disks. Check your quotient and remainder by using multiplication and addition.

1. $7 \div 3$



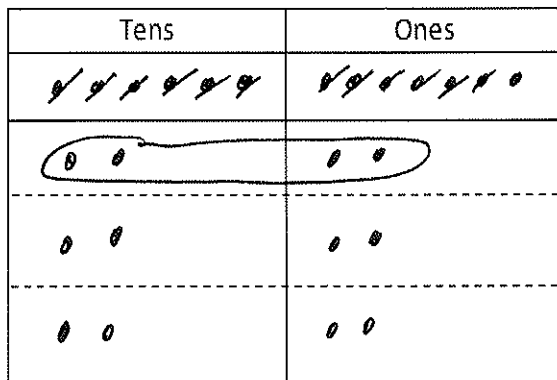
quotient = 2

remainder = 1

Check Your Work

$$\begin{array}{r} 3 \\ \times 2 \\ \hline 6 \\ + 1 \\ \hline 7 \end{array}$$

2. $67 \div 3$



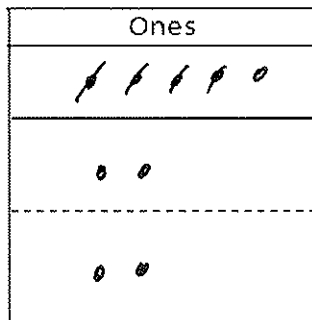
quotient = 22

remainder = 1

Check Your Work

$$\begin{array}{r} 22 \\ \times 3 \\ \hline 66 \\ + 1 \\ \hline 67 \end{array}$$

3. $5 \div 2$



quotient = 2

remainder = 1

Check Your Work

$$\begin{array}{r} 2 \\ \times 2 \\ \hline 4 \\ + 1 \\ \hline 5 \end{array}$$

4. $85 \div 2$

Tens	Ones

quotient = 42

remainder = 1

Check Your Work

$$\begin{array}{r} 42 \\ \times 2 \\ \hline 84 \\ + 1 \\ \hline 85 \end{array}$$

5. $5 \div 4$

Ones

quotient = 1

remainder = 1

Check Your Work

$$\begin{array}{r} 4 \\ \times 1 \\ \hline 4 \\ + 1 \\ \hline 5 \end{array}$$

6. $85 \div 4$

Tens	Ones

quotient = 21

remainder = 1

Check Your Work

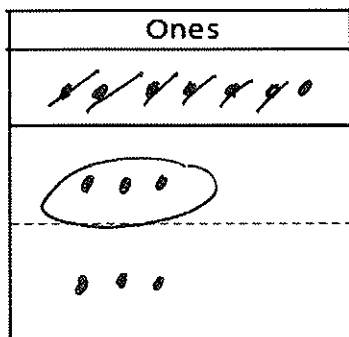
$$\begin{array}{r} 21 \\ \times 4 \\ \hline 84 \\ + 1 \\ \hline 85 \end{array}$$

Name _____

Date _____

Show the division using disks. Check your quotient and remainder by using multiplication and addition.

1. $7 \div 2$



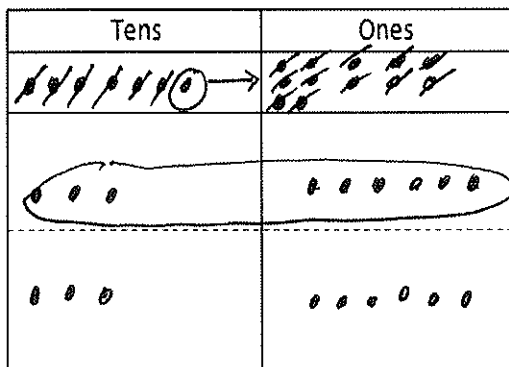
quotient = 3

remainder = 1

Check Your Work

$$\begin{array}{r} 2 \\ \times 3 \\ \hline 6 \\ + 1 \\ \hline 7 \end{array}$$

2. $73 \div 2$



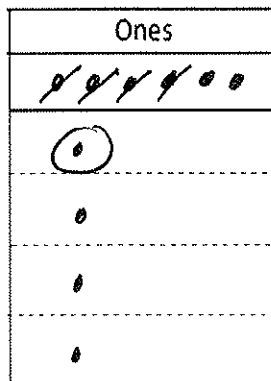
quotient = 36

remainder = 0

Check Your Work

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

3. $6 \div 4$



quotient = 1

remainder = 2

Check Your Work

$$\begin{array}{r} 4 \\ \times 1 \\ \hline 4 \\ + 2 \\ \hline 6 \end{array}$$

4. $51 \div 4$

Tens	Ones

quotient = 12

remainder = 3

Check Your Work

$$\begin{array}{r} 12 \\ \times 4 \\ \hline 48 \\ + 3 \\ \hline 51 \end{array}$$

5. $8 \div 3$

Ones

quotient = 2

remainder = 2

Check Your Work

$$\begin{array}{r} 3 \\ \times 2 \\ \hline 6 \\ + 2 \\ \hline 8 \end{array}$$

6. $84 \div 3$

Tens	Ones

quotient = 28

remainder = 0

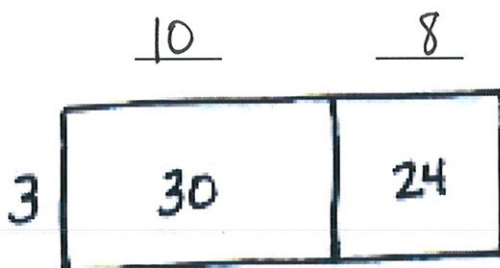
Check Your Work

$$\begin{array}{r} 28 \\ \times 3 \\ \hline 24 \\ 60 \\ \hline 84 \end{array}$$

Name Key

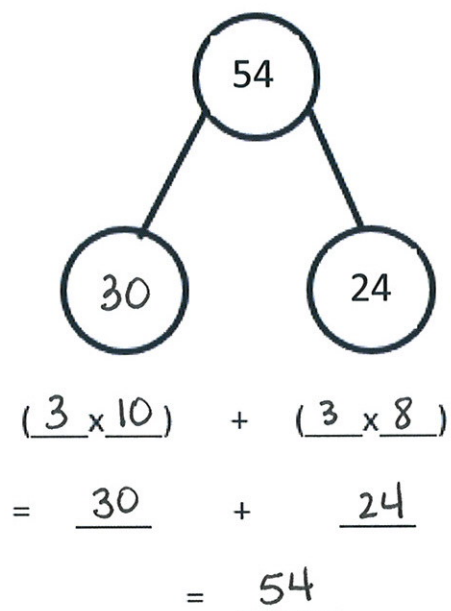
HOMEWORK

1. Maria solved a multiplication problem by drawing an area model, but she left off the length measurements along the top. Can you figure out the missing measurements?

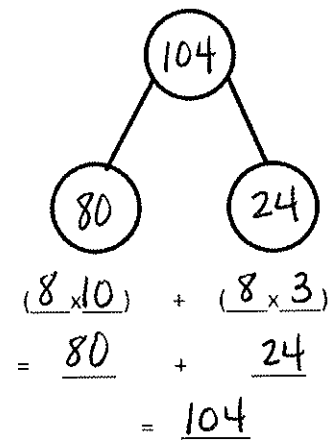
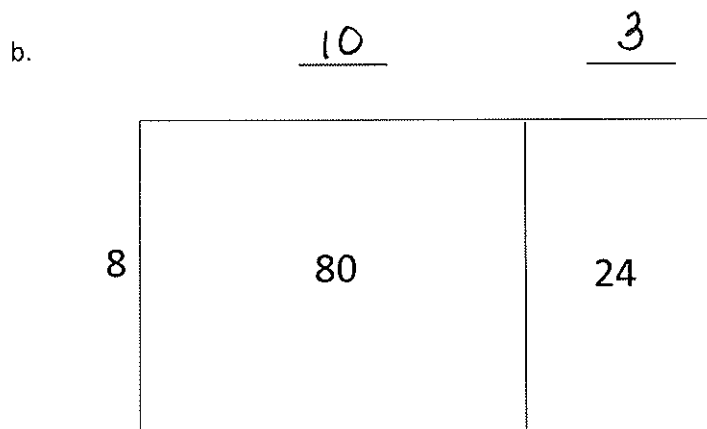
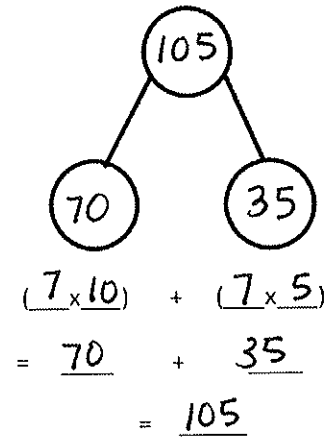
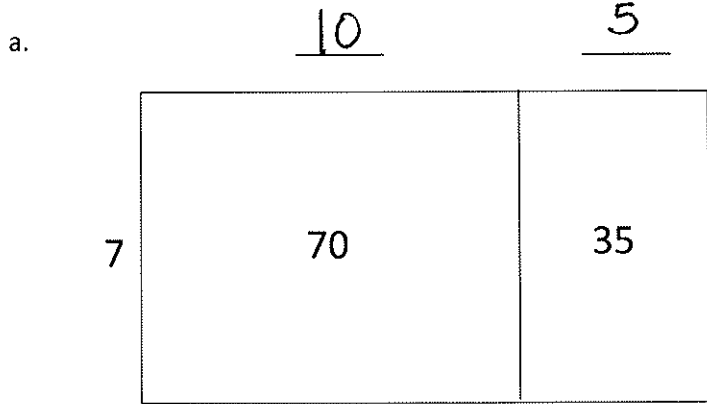


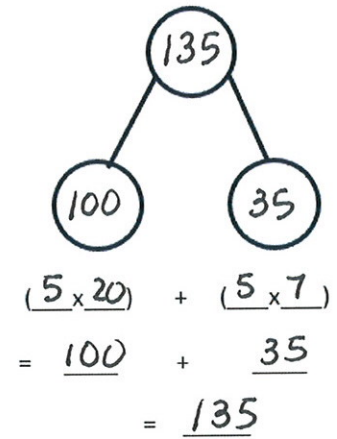
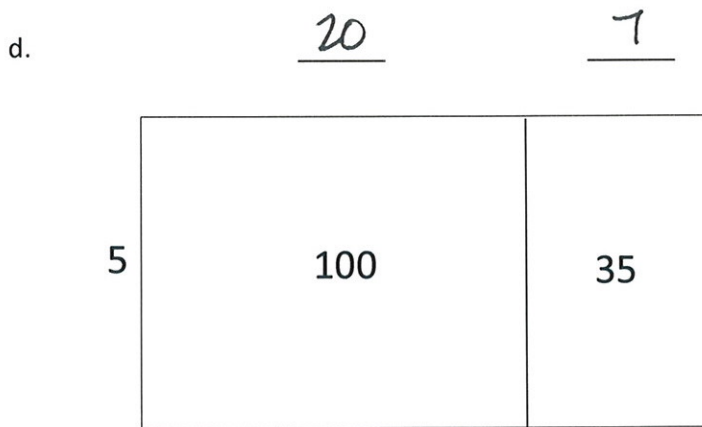
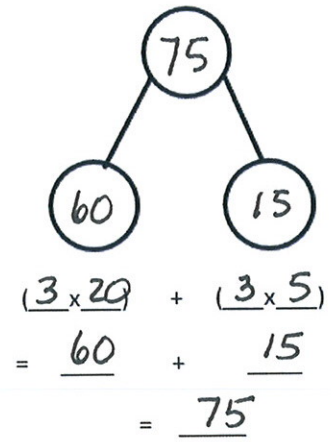
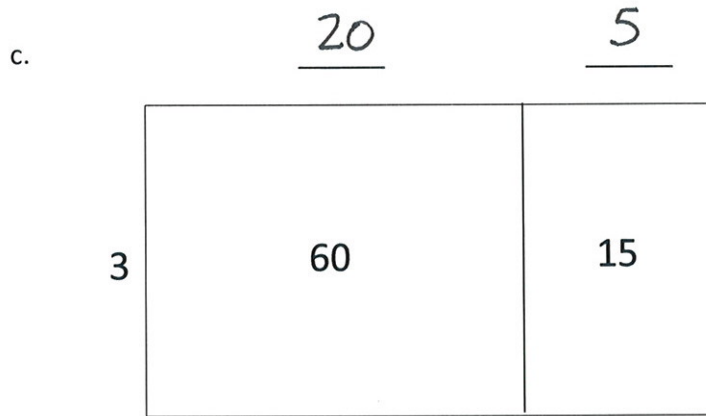
$$3 \times \underline{18} = 54$$

Show a number bond to represent Maria's area model.



2. Fill in the missing lengths on the area models and complete the number bond.



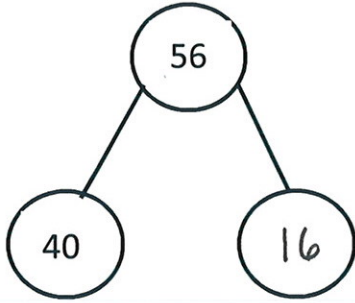


Name Key

HOMework

1. Use number bonds to divide greater numbers.

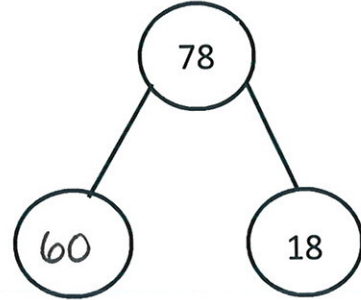
a.



$$\begin{aligned} & (\underline{40} \div 4) + (\underline{16} \div 4) \\ = & \underline{10} + \underline{4} \\ & = \underline{14} \end{aligned}$$

$$56 \div 4 = \underline{14}$$

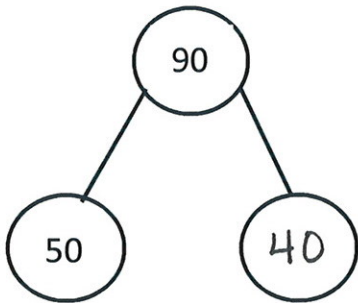
b.



$$\begin{aligned} & (\underline{60} \div 6) + (\underline{18} \div 6) \\ = & \underline{10} + \underline{3} \\ & = \underline{13} \end{aligned}$$

$$78 \div 6 = \underline{13}$$

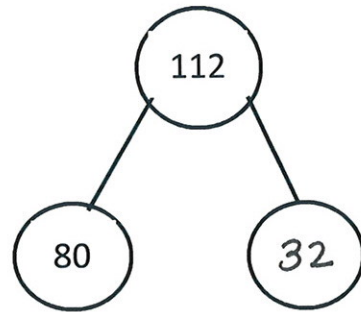
c.



$$\begin{aligned} & (\underline{50} \div 5) + (\underline{40} \div 5) \\ = & \underline{10} + \underline{8} \\ & = \underline{18} \end{aligned}$$

$$90 \div 5 = \underline{18}$$

d.

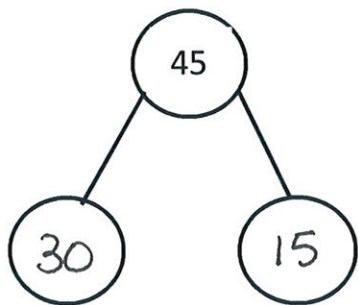


$$\begin{aligned} & (\underline{80} \div 8) + (\underline{32} \div 8) \\ = & \underline{10} + \underline{4} \\ & = \underline{14} \end{aligned}$$

$$112 \div 8 = \underline{14}$$

2. Decompose the whole into multiples of the divisor to complete the number bonds.

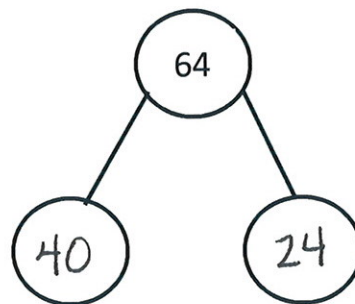
a.



$$\begin{aligned} & (\underline{30} \div 3) + (\underline{15} \div 3) \\ = & \underline{10} + \underline{5} \\ & = \underline{15} \end{aligned}$$

$$45 \div 3 = \underline{15}$$

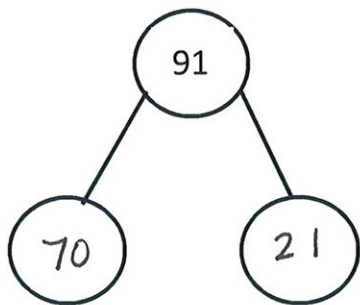
b.



$$\begin{aligned} & (\underline{40} \div 4) + (\underline{24} \div 4) \\ = & \underline{10} + \underline{6} \\ & = \underline{16} \end{aligned}$$

$$64 \div 4 = \underline{16}$$

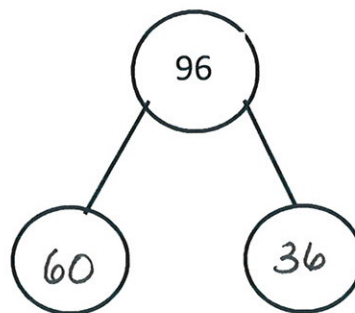
c.



$$\begin{aligned} & (\underline{70} \div 7) + (\underline{21} \div 7) \\ = & \underline{10} + \underline{3} \\ & = \underline{13} \end{aligned}$$

$$91 \div 7 = \underline{13}$$

d.



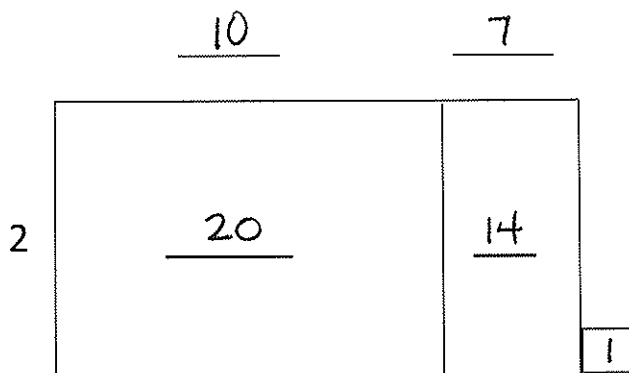
$$\begin{aligned} & (\underline{60} \div 6) + (\underline{36} \div 6) \\ = & \underline{10} + \underline{6} \\ & = \underline{16} \end{aligned}$$

$$96 \div 6 = \underline{16}$$

Name Key

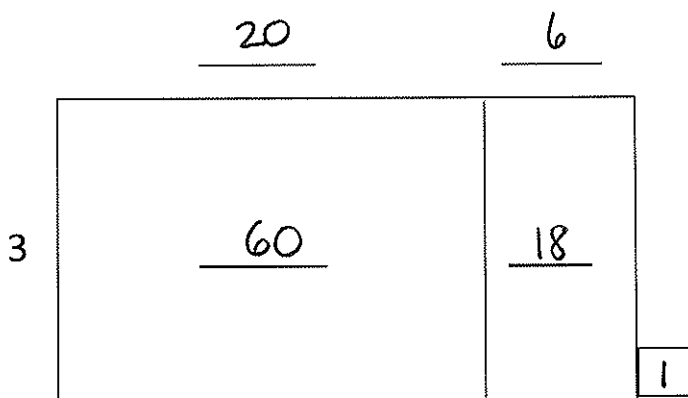
Date _____

1. Solve $35 \div 2$ using an area model.



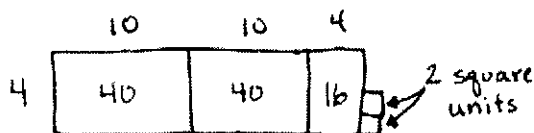
$35 \div 2 = \underline{17} \text{ r } \underline{1}$

2. Solve $79 \div 3$ using an area model.



$79 \div 3 = \underline{26} \text{ r } \underline{1}$

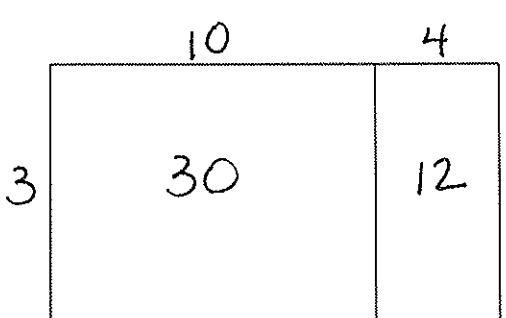
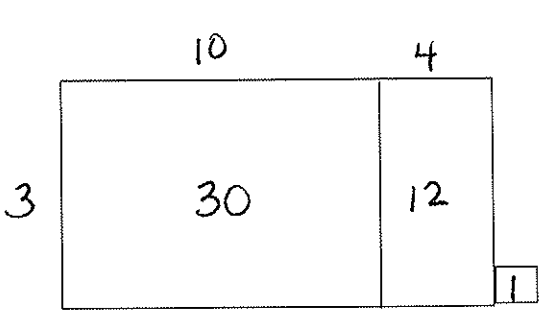
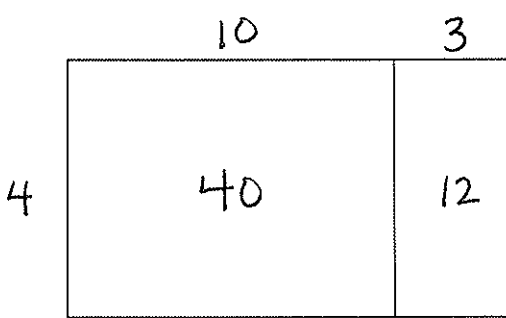
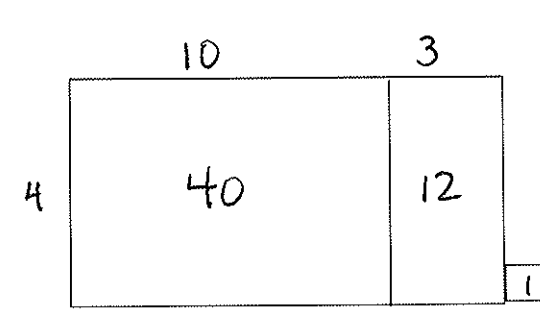
3. Paula solved the following division problem by drawing an area model.



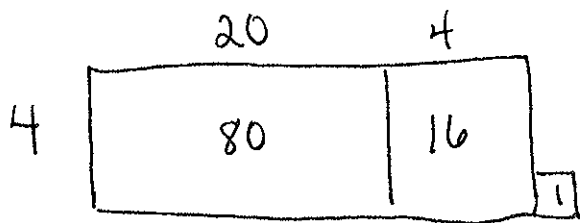
What division problem did she solve?

$\underline{98} \div \underline{4} = \underline{24} \text{ r } \underline{2}$

Solve the following problems using the area model.

<p>4. $42 \div 3 = 14$</p> 	<p>5. $43 \div 3 = 14 r 1$</p> 
<p>6. $52 \div 4 = 13$</p> 	<p>7. $53 \div 4 = 13 r 1$</p> 

8. Ninety-seven lunch trays were placed equally in 4 stacks. How many lunch trays were in each stack? How many lunch trays will be leftover?



There were 24 trays in each stack and one left over.

$$97 \div 4 = 24 r 1$$

Name Key

Date _____

Solve using the Forgiving Method.

1. $84 \div 2$

$$\begin{array}{r} 42 \\ 2 \overline{) 84} \\ \underline{-80} \quad 40 \\ 4 \\ \underline{-4} \quad 2 \\ 0 \quad \underline{2} \\ 42 \end{array}$$

2. $84 \div 4$

$$\begin{array}{r} 21 \\ 4 \overline{) 84} \\ \underline{-80} \quad 20 \\ 4 \\ \underline{-4} \quad 1 \\ 0 \quad \underline{1} \\ 21 \end{array}$$

3. $48 \div 3$

$$\begin{array}{r} 16 \\ 3 \overline{) 48} \\ \underline{-30} \quad 10 \\ 18 \\ \underline{-18} \quad 6 \\ 0 \quad \underline{6} \\ 16 \end{array}$$

4. $80 \div 5$

$$\begin{array}{r} 16 \\ 5 \overline{) 80} \\ \underline{-50} \quad 10 \\ 30 \\ \underline{-30} \quad 6 \\ 0 \quad \underline{6} \\ 16 \end{array}$$

5. $79 \div 5$

$$\begin{array}{r}
 15 \text{ r} 4 \\
 5 \overline{) 79} \\
 \underline{-50} \quad 10 \\
 29 \\
 \underline{-25} \quad 5 \\
 4 \quad \underline{15}
 \end{array}$$

6. $91 \div 4$

$$\begin{array}{r}
 22 \text{ r} 3 \\
 4 \overline{) 91} \\
 \underline{-80} \quad 20 \\
 11 \\
 \underline{-8} \quad 2 \\
 3 \quad \underline{22}
 \end{array}$$

7. $91 \div 6$

$$\begin{array}{r}
 15 \text{ r} 1 \\
 6 \overline{) 91} \\
 \underline{-60} \quad 10 \\
 31 \\
 \underline{-30} \quad 5 \\
 1 \quad \underline{15}
 \end{array}$$

8. $91 \div 7$

$$\begin{array}{r}
 13 \\
 7 \overline{) 91} \\
 \underline{-70} \quad 10 \\
 21 \\
 \underline{-21} \quad 3 \\
 0
 \end{array}$$

Name Key Date _____

1. Record the factors of the given numbers as multiplication sentences and as a list in order from least to greatest. Classify each as prime (P) or composite (C). The first problem is done for you.

	Multiplication Sentences	Factors	P or C
a.	8 $1 \times 4 = 8$ $2 \times 4 = 8$	The factors of 8 are: 1, 2, 4, and 8	C
b.	10 1×10 2×5	The factors of 10 are: 1, 2, 5, 10	C
c.	11 1×11	The factors of 11 are: 1, 11	P
d.	14 1×14 2×7	The factors of 14 are: 1, 2, 7, 14	C
e.	17 1×17	The factors of 17 are: 1, 17	P
f.	20 1×20 2×10 4×5	The factors of 20 are: 1, 2, 4, 5, 10, 20	C
g.	22 1×22 2×11	The factors of 22 are: 1, 2, 11, 22	C
h.	23 1×23	The factors of 23 are: 1, 23	P

i.	25	1×25 5×5	The factors of 25 are: $1, 5, 25$	C
j.	26	1×26 2×13	The factors of 26 are: $1, 2, 13, 26$	C
k.	27	1×27 3×9	The factors of 27 are: $1, 3, 9, 27$	C
l.	28	1×28 2×14 4×7	The factors of 28 are: $1, 2, 4, 7, 14, 28$	C

2. Bryan says that only even numbers are composite.
- a. List all of the odd numbers less than 20 in numerical order.

1, 3, 5, 7, 9, 11, 13, 15, 17, 19

- b. Use your list to show that Bryan's claim is false.

Here are examples of composite odd numbers:

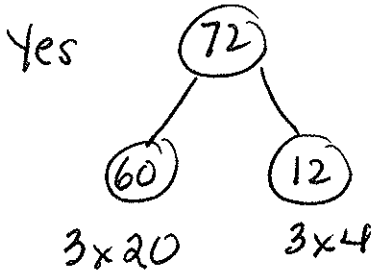
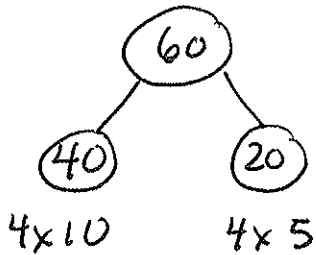
$$9 = 3 \times 3, 1 \times 9$$

$$15 = 3 \times 5, 1 \times 15$$

Name Key

Date _____

1. Explain your thinking or use division to answer the following.

<p>a. Is 2 a factor of 72?</p> <p>Yes, it is even.</p>	<p>b. Is 2 a factor of 73?</p> <p>No, it is odd.</p>
<p>c. Is 3 a factor of 72?</p> <p>Yes</p> 	<p>d. Is 2 a factor of 60?</p> <p>Yes, it is even.</p>
<p>e. Is 6 a factor of 72?</p> <p>Yes. $6 \times 12 = 72$</p>	<p>f. Is 4 a factor of 60?</p> <p>Yes</p> 
<p>g. Is 5 a factor of 72?</p> <p>No. It does not end in 0 or 5.</p>	<p>h. Is 8 a factor of 60?</p> <p>No. $8 \times 7 = 56$ $8 \times 8 = 64$</p>

2. Use the associative property to find more factors of 12 and 30.

a. $12 = 4 \times 3$

$= (\underline{2} \times 2) \times 3$

$= \underline{2} \times (2 \times 3)$

$= \underline{2} \times 6$

$= \underline{12}$

b. $30 = \underline{6} \times 5$

$= (\underline{2} \times 3) \times 5$

$= \underline{2} \times (3 \times 5)$

$= \underline{2} \times 15$

$= \underline{30}$

2. Use the forgiving method of division to show that 5 is a factor of 70, 80, and 90.

$70 \div 5$

$$\begin{array}{r} 14 \\ 5 \overline{) 70} \\ \underline{-50} \quad 10 \\ 20 \\ \underline{-20} \quad 4 \\ 0 \quad \underline{14} \end{array}$$

$80 \div 5$

$$\begin{array}{r} 16 \\ 5 \overline{) 80} \\ \underline{-50} \quad 10 \\ 30 \\ \underline{-30} \quad 6 \\ 0 \quad \underline{16} \end{array}$$

$90 \div 5$

$$\begin{array}{r} 18 \\ 5 \overline{) 90} \\ \underline{-50} \quad 10 \\ 40 \\ \underline{-40} \quad 8 \\ 0 \quad \underline{18} \end{array}$$

Name Key Date _____

1. List the numbers that have 30 as a multiple.

1, 2, 3, 5, 6, 10, 15, 30

2. Use mental math, division, or the associate property to solve.

a. Is 12 a multiple of 3? Yes Is 3 a factor of 12? Yes

b. Is 48 a multiple of 8? Yes Is 48 a factor of 8? No

c. Is 56 a multiple of 6? No Is 6 a factor of 56? No

3. List three prime numbers. 3, 7, 11 etc.

4. Can a prime number be a multiple of any other number except itself?

Explain your reasons why or why not.

No. Primes only have two factors, 1 and itself,
so if you skip count by the other numbers,
you won't land on a prime.

5. Follow the directions below.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

a. Underline the multiples of 6. When a number is a multiple of 6, what are the possible values for the ones digit? 0, 2, 4, 6, 8

b. Draw a square around the multiples of 4. Look at the multiples of 4 that have an odd number in the tens place. What values do they have in the ones place?
2 or 6

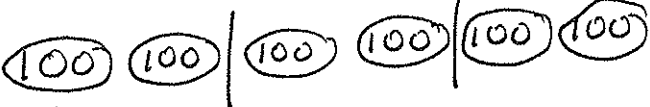
c. Circle the multiples of 9. Choose one. What do you notice about the sum of the digits? Choose another one. What do you notice about the sum of the digits?
the sum of the digits equal a multiple of 9.


Name Key Date _____

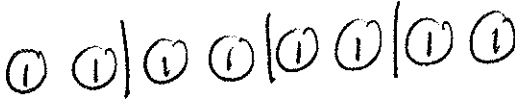
1. Draw number disks to represent the following problems. Rewrite each in unit form and solve.

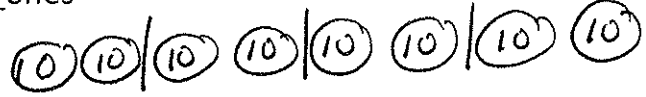
a. $6 \div 3 = \underline{2}$ 
 6 ones $\div 3 = \underline{2}$ ones

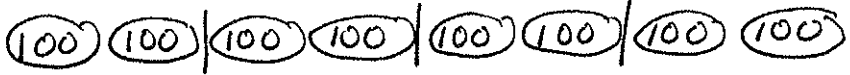
b. $60 \div 3 = \underline{20}$ 
 6 tens $\div 3 = \underline{2 \text{ tens}}$

c. $600 \div 3 = \underline{200}$ 
6 hundreds $\div 3 = \underline{2 \text{ hundreds}}$

d. $6,000 \div 3 = \underline{2,000}$ 
6 thousands $\div 3 = \underline{2 \text{ thousands}}$

e. $8 \div 4 = \underline{2}$ 
 12 ones $\div 4 = \underline{2}$ ones

f. $80 \div 4 = \underline{20}$ 

f. $80 \div 4 = \underline{20}$
8 tens $\div 4 = \underline{2 \text{ tens}}$ 

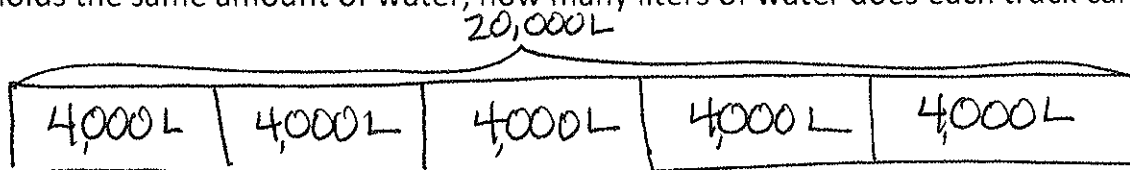
g. $800 \div 4 = \underline{200}$
8 hundreds $\div 4 = \underline{2 \text{ hundreds}}$

2. Rewrite each in unit form. Solve for the quotient.

<p>a. $800 \div 4 = 200$ 8 hundreds $\div 4 =$ 2 hundreds</p>	<p>b. $900 \div 3 = 300$ 9 hundreds $\div 3 =$ 3 hundreds</p>	<p>c. $400 \div 2 = 200$ 4 hundreds $\div 2 =$ 2 hundreds</p>
<p>d. $200 \div 4$ 20 tens $\div 4 =$ ___ tens</p>	<p>e. $160 \div 2 = 80$ 16 tens $\div 2 =$ 8 tens</p>	<p>f. $400 \div 5 = 80$ 40 tens $\div 5 =$ 8 tens</p>
<p>g. $1,200 \div 3$ 12 hundreds $\div 3 =$ ___ hundreds</p>	<p>h. $1,600 \div 4 = 400$ 16 hundreds $\div 4 =$ 4 hundreds</p>	<p>i. $2,400 \div 4 = 600$ 24 hundreds $\div 4 =$ 6 hundreds</p>

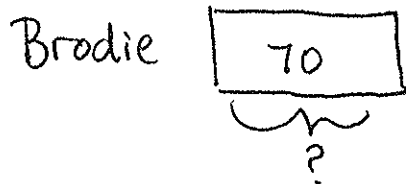
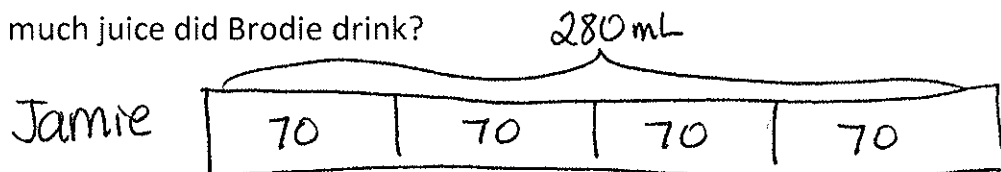
Draw tape diagrams to solve.

4. A fleet of five fire engines carries a total of 20,000 liters of water. If each truck holds the same amount of water, how many liters of water does each truck carry?



Each truck carries 4,000 L of water.

5. Jamie drank 4 times as much juice as Brodie. Jamie drank 280 mL of juice. How much juice did Brodie drink?



Brodie drank 70 mL of juice.

Name Key

Date _____

1. Divide using the forgiving method.

<p>a. $378 \div 2$</p> $\begin{array}{r} 189 \\ 2 \overline{) 378} \\ \underline{-200} \quad 100 \\ 178 \\ \underline{-160} \quad 80 \\ 18 \\ \underline{-18} \quad 9 \\ 0 \quad \underline{9} \\ 189 \end{array}$	<p>b. $795 \div 3$</p> $\begin{array}{r} 265 \\ 3 \overline{) 795} \\ \underline{-600} \quad 200 \\ 195 \\ \underline{-180} \quad 60 \\ 15 \\ \underline{-15} \quad 5 \\ 0 \quad \underline{5} \\ 265 \end{array}$
<p>c. $512 \div 4$</p> $\begin{array}{r} 128 \\ 4 \overline{) 512} \\ \underline{-400} \quad 100 \\ 112 \\ \underline{-80} \quad 20 \\ 32 \\ \underline{-32} \quad 8 \\ 0 \quad \underline{8} \\ 128 \end{array}$	<p>d. $492 \div 4$</p> $\begin{array}{r} 123 \\ 4 \overline{) 492} \\ \underline{-400} \quad 100 \\ 92 \\ \underline{-80} \quad 20 \\ 12 \\ \underline{-12} \quad 3 \\ 0 \quad \underline{3} \\ 123 \end{array}$
<p>e. $539 \div 3$</p> $\begin{array}{r} 179 \text{ r } 2 \\ 3 \overline{) 539} \\ \underline{-300} \quad 100 \\ 239 \\ \underline{-210} \quad 70 \\ 29 \\ \underline{-27} \quad 9 \\ 2 \quad \underline{9} \\ 179 \end{array}$	<p>f. $862 \div 5$</p> $\begin{array}{r} 172 \text{ r } 2 \\ 5 \overline{) 862} \\ \underline{-500} \quad 100 \\ 362 \\ \underline{-350} \quad 70 \\ 12 \\ \underline{-10} \quad 2 \\ 2 \quad \underline{2} \\ 172 \end{array}$

<p>g. $498 \div 3$</p> $\begin{array}{r} 166 \\ 3 \overline{)498} \\ \underline{-300} \quad 100 \\ 198 \\ \underline{-180} \quad 60 \\ 18 \\ \underline{-18} \quad 6 \\ 0 \quad \underline{6} \\ 166 \end{array}$	<p>h. $783 \div 5$</p> $\begin{array}{r} 156 \text{ r } 3 \\ 5 \overline{)783} \\ \underline{-500} \quad 100 \\ 283 \\ \underline{-250} \quad 50 \\ 33 \\ \underline{-30} \quad 6 \\ 3 \quad \underline{6} \\ 156 \end{array}$
<p>i. $621 \div 4$</p> $\begin{array}{r} 155 \text{ r } 1 \\ 4 \overline{)621} \\ \underline{-400} \quad 100 \\ 221 \\ \underline{-200} \quad 50 \\ 21 \\ \underline{-20} \quad 5 \\ 1 \quad \underline{5} \\ 155 \end{array}$	<p>j. $531 \div 4$</p> $\begin{array}{r} 132 \text{ r } 3 \\ 4 \overline{)531} \\ \underline{-400} \quad 100 \\ 131 \\ \underline{-120} \quad 30 \\ 11 \\ \underline{-8} \quad 2 \\ 3 \quad \underline{2} \\ 132 \end{array}$

2. Selena's dog completed an obstacle course that was 932 meters long. There were 4 parts to the course, all equal in length. How long was 1 part of the course?

$$\begin{array}{r} 233 \\ 4 \overline{)932} \\ \underline{-800} \quad 200 \\ 132 \\ \underline{-120} \quad 30 \\ 12 \\ \underline{-12} \quad 3 \\ 0 \end{array}$$

Each part of the course was 233 meters long.

Name Key

Date _____

1. Divide using the Forgiving Method.

<p>a. $2,464 \div 4$</p> $\begin{array}{r} 616 \\ 4 \overline{)2464} \\ \underline{-2400} \\ 64 \\ \underline{-40} \\ 24 \\ \underline{-24} \\ 0 \end{array}$ <p style="text-align: right;">600 10 6 <hr/>616</p>	<p>b. $1,828 \div 3$</p> $\begin{array}{r} 609 \text{ r } 1 \\ 3 \overline{)1828} \\ \underline{-1800} \\ 28 \\ \underline{-27} \\ 1 \end{array}$ <p style="text-align: right;">600 9 <hr/>609</p>
<p>c. $9,426 \div 3$</p> $\begin{array}{r} 3142 \\ 3 \overline{)9426} \\ \underline{-9000} \\ 426 \\ \underline{-300} \\ 126 \\ \underline{-120} \\ 6 \\ \underline{-6} \\ 0 \end{array}$ <p style="text-align: right;">3000 100 40 2 <hr/>3142</p>	<p>d. $6,587 \div 2$</p> $\begin{array}{r} 3293 \text{ r } 1 \\ 2 \overline{)6587} \\ \underline{-6000} \\ 587 \\ \underline{-400} \\ 187 \\ \underline{-180} \\ 7 \\ \underline{-6} \\ 1 \end{array}$ <p style="text-align: right;">3000 200 90 3 <hr/>3293</p>

e. $5,425 \div 3$

$$\begin{array}{r} 1808 \text{ r } 1 \\ 3 \overline{) 5425} \\ \underline{-3000} \quad 1000 \\ 2425 \\ \underline{-2400} \quad 800 \\ 25 \\ \underline{-24} \quad 8 \\ 1 \\ \hline 1808 \end{array}$$

f. $5,425 \div 2$

$$\begin{array}{r} 2712 \text{ r } 1 \\ 2 \overline{) 5425} \\ \underline{-4000} \quad 2000 \\ 1425 \\ \underline{-1400} \quad 700 \\ 25 \\ \underline{-24} \quad 12 \\ 1 \\ \hline 2712 \end{array}$$

g. $8,427 \div 3$

$$\begin{array}{r} 2809 \\ 3 \overline{) 8427} \\ \underline{-6000} \quad 2000 \\ 2427 \\ \underline{-2400} \quad 800 \\ 27 \\ \underline{-27} \quad 9 \\ 0 \\ \hline 2809 \end{array}$$

h. $8,426 \div 3$

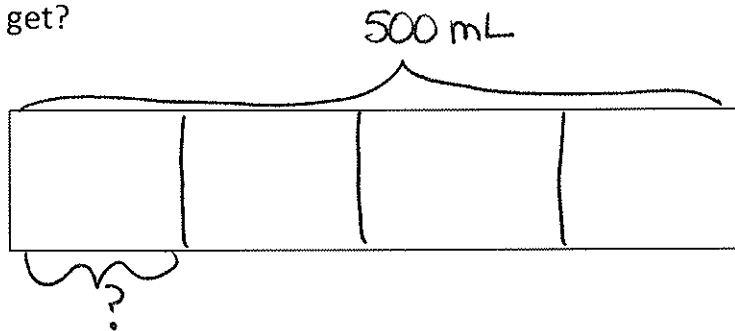
$$\begin{array}{r} 2808 \text{ r } 2 \\ 3 \overline{) 8426} \\ \underline{-6000} \quad 2000 \\ 2426 \\ \underline{-2400} \quad 800 \\ 26 \\ \underline{-24} \quad 8 \\ 2 \\ \hline 2808 \end{array}$$

Name Key

HOMEWORK

Draw tape diagrams to solve. Identify if the group size or the number of groups is unknown.

1. 500 mL of juice was shared equally by 4 children. How much juice did each child get?

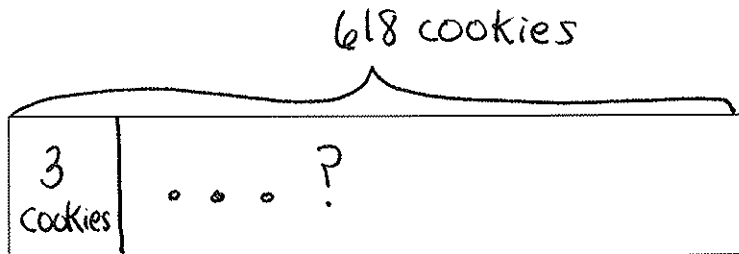


$$\begin{array}{r}
 125 \\
 4 \overline{) 500} \\
 \underline{-400} \quad 100 \\
 100 \\
 \underline{-100} \quad 25 \\
 0 \quad 125
 \end{array}$$

X group size unknown
 ___ number of groups unknown

Each child got 125 mL of juice.

2. Kelly separated 618 cookies into baggies. Each baggie contained 3 cookies. How many baggies of cookies did Kelly make?

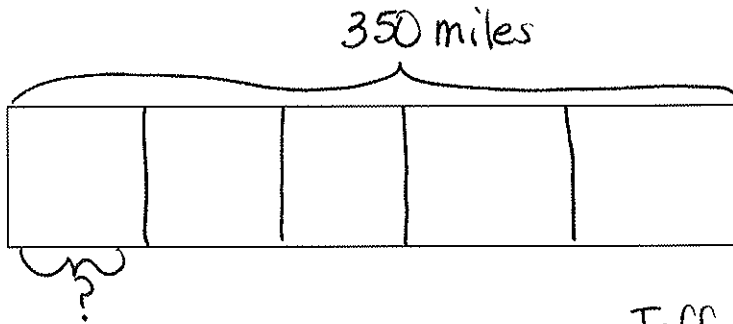


$$\begin{array}{r}
 209 \\
 3 \overline{) 618} \\
 \underline{-600} \quad 200 \\
 18 \\
 \underline{-18} \quad 9 \\
 0 \quad 209
 \end{array}$$

___ group size unknown
X number of groups unknown

Kelly made 209 baggies of cookies.

3. Jeff biked the same distance each day for 5 days. If he travelled 350 miles altogether, how many miles did he travel each day?



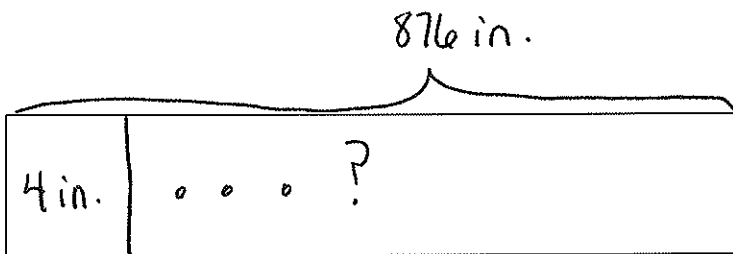
$$\begin{array}{r} 70 \\ 5 \overline{)350} \\ \underline{350} \\ 0 \end{array} \quad \begin{array}{l} 70 \\ 70 \end{array}$$

Jeff biked 70 miles each day.

group size unknown

number of groups unknown

4. A piece of ribbon 876 inches long was cut by a machine into 4-inch long strips to be made into bows. How many strips were cut?



$$\begin{array}{r} 219 \\ 4 \overline{)876} \\ \underline{-800} \\ 76 \\ \underline{-40} \\ 36 \\ \underline{-36} \\ 0 \end{array} \quad \begin{array}{l} 200 \\ 10 \\ 9 \end{array}$$

group size unknown

number of groups unknown

They cut 219 strips of ribbon.

Name key

Date _____

Use the forgiving method of division to solve.

- Mary bought a package of 435 party favors to give to the guests at her birthday party. She planned to give 9 party favors to each guest. How many guests is she expecting?

Mary is expecting
48 guests.

$$\begin{array}{r}
 48r3 \\
 9 \overline{) 435} \\
 \underline{360} \quad 40 \\
 75 \\
 \underline{-72} \quad 8 \\
 3
 \end{array}$$

- 4,000 pencils were donated to an elementary school. If 8 classrooms shared the pencils equally, how many pencils did each class receive?

Each class received
500 pencils.

$$\begin{array}{r}
 500 \\
 8 \overline{) 4000} \\
 \underline{-4000} \quad 500 \\
 0
 \end{array}$$

3. 2,008 kilograms of potatoes were packed into sacks weighing 8 kilograms each. How many sacks were packed?

They packed 251 sacks of potatoes.

$$\begin{array}{r}
 251 \\
 8 \overline{) 2008} \\
 \underline{-1600} \quad 200 \\
 408 \\
 \underline{-400} \quad 50 \\
 8 \\
 \underline{-8} \quad 1 \\
 0 \quad 251
 \end{array}$$

4. A baker made 7 batches of muffins. There were a total of 252 muffins. If there were the same number of muffins in each batch, how many muffins were in a batch?

There are 36 muffins in each batch.

$$\begin{array}{r}
 36 \\
 7 \overline{) 252} \\
 \underline{-210} \quad 30 \\
 42 \\
 \underline{-42} \quad 6 \\
 0 \quad 36
 \end{array}$$

Name Key

Date _____

Use an area model to represent the following expressions in word form.
Record the partial products and solve.

1. 30×17

<u>10</u>	<u>7</u>
<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">30</div> <div style="border: 1px solid black; padding: 5px;"> $\underline{3}$ tens \times $\underline{1}$ tens = $\underline{3}$ hundreds = <u>300</u> </div> </div>	<div style="border: 1px solid black; padding: 5px;"> $\underline{3}$ tens \times $\underline{7}$ = $\underline{21}$ tens = <u>210</u> </div>

$$\begin{array}{r}
 30 \\
 \times 17 \\
 \hline
 210 \\
 + 300 \\
 \hline
 510
 \end{array}$$

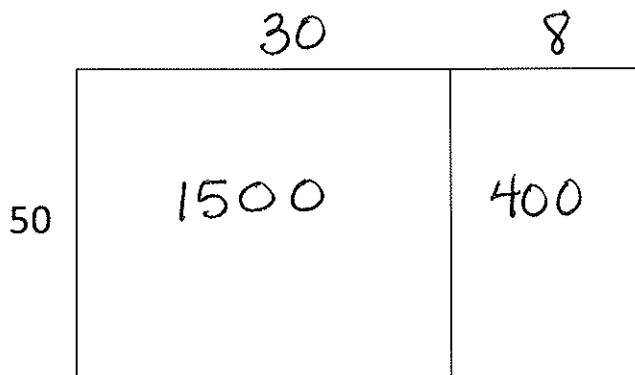
2. 40×58

<u>50</u>	<u>8</u>
<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">40</div> <div style="border: 1px solid black; padding: 5px;"> $\underline{4}$ tens \times $\underline{5}$ tens = $\underline{20}$ hundreds = <u>2000</u> </div> </div>	<div style="border: 1px solid black; padding: 5px;"> $\underline{4}$ tens \times $\underline{8}$ = $\underline{32}$ tens = <u>320</u> </div>

$$\begin{array}{r}
 40 \\
 \times 58 \\
 \hline
 320 \\
 + 2000 \\
 \hline
 2,320
 \end{array}$$

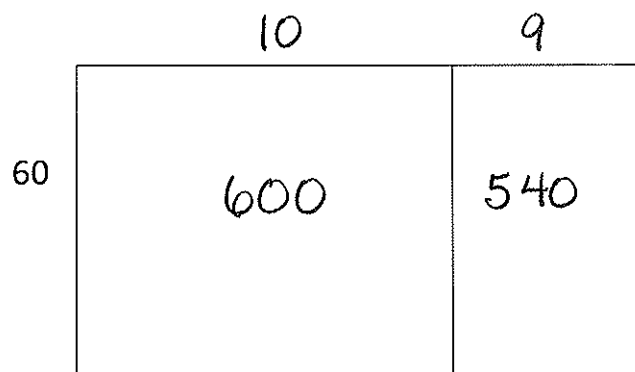
Draw an area model to represent the following expressions in standard form.
Record the partial products vertically and solve.

3. 50×38



$$\begin{array}{r}
 50 \\
 \times 38 \\
 \hline
 400 \\
 + 1500 \\
 \hline
 1,900
 \end{array}$$

4. 60×19



$$\begin{array}{r}
 60 \\
 \times 19 \\
 \hline
 540 \\
 + 600 \\
 \hline
 1,140
 \end{array}$$

Solve using partial products.

5. 20×88

$$\begin{array}{r}
 20 \\
 \times 88 \\
 \hline
 160 \\
 + 1600 \\
 \hline
 1,760
 \end{array}$$

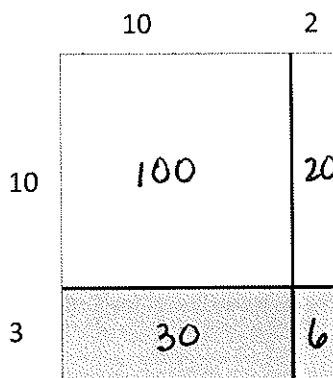
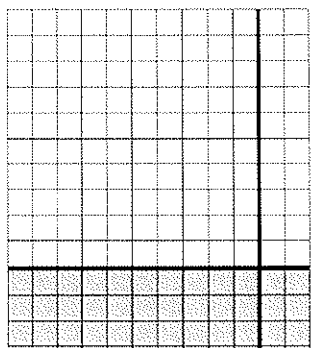
6. 30×8

$$\begin{array}{r}
 30 \\
 \times 8 \\
 \hline
 240
 \end{array}$$

Name Key

Date _____

1. Write the expression shown by these area models. 13 x 12



Use the distributive property to find the product.

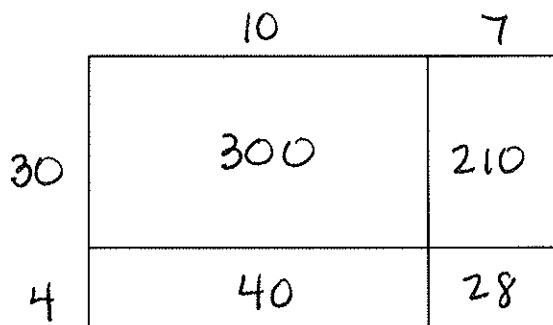
$$13 \times 12 = (10 \times \underline{10}) + (10 \times \underline{2}) + (3 \times \underline{10}) + (3 \times \underline{2})$$

$$13 \times 12 = \underline{100} + \underline{20} + \underline{30} + \underline{6}$$

$$13 \times 12 = \underline{156}$$

Use an area model to represent the following expressions. Record the partial products and solve.

2. 34×17



$$\begin{array}{r}
 34 \\
 \times 17 \\
 \hline
 28 \\
 210 \\
 \hline
 40 \\
 + 300 \\
 \hline
 578
 \end{array}$$

Draw an area model to represent the following expressions. Record the partial products vertically and solve.

3. 45×18

	10	8
40	400	320
5	50	40

$$\begin{array}{r}
 45 \\
 \times 18 \\
 \hline
 40 \\
 320 \\
 \hline
 50 \\
 + 400 \\
 \hline
 810
 \end{array}$$

4. 45×19

	10	9
40	400	360
5	50	45

$$\begin{array}{r}
 45 \\
 \times 19 \\
 \hline
 45 \\
 360 \\
 \hline
 50 \\
 + 400 \\
 \hline
 855
 \end{array}$$

Solve using four partial products.

5. 12×47

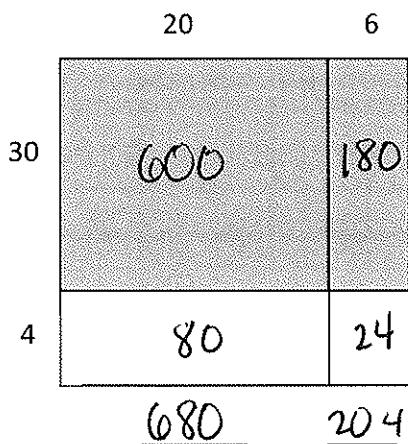
$$\begin{array}{r}
 12 \\
 \times 47 \\
 \hline
 14 \\
 70 \\
 80 \\
 \hline
 + 400 \\
 \hline
 564
 \end{array}$$

6. 23×93

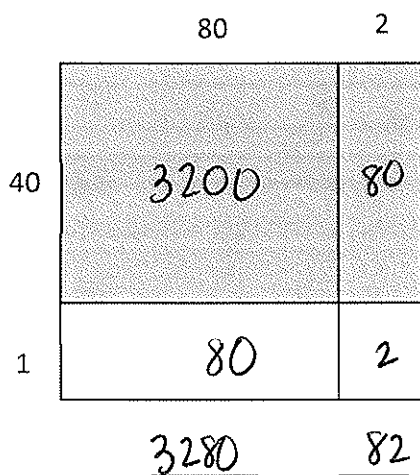
$$\begin{array}{r}
 23 \\
 \times 93 \\
 \hline
 9 \\
 60 \\
 270 \\
 \hline
 + 1800 \\
 \hline
 2,139
 \end{array}$$

Name Key Date _____

1. Solve using the area model. Add the columns to record two partial products.



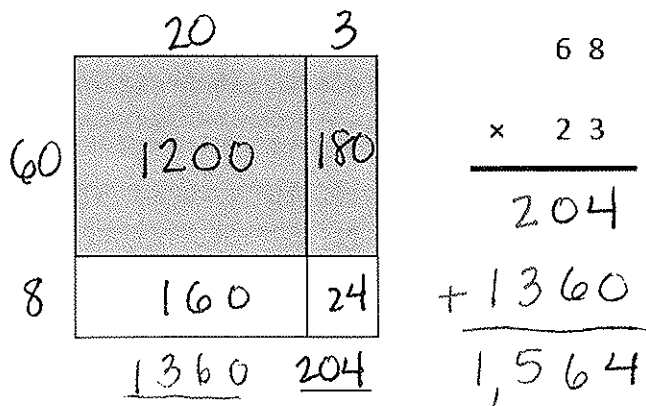
$$\begin{array}{r}
 34 \\
 \times 26 \\
 \hline
 204 \quad \text{6 ones} \times 34 \text{ ones} \\
 \hline
 680 \quad \text{2 tens} \times 34 \text{ ones} \\
 \hline
 884
 \end{array}$$



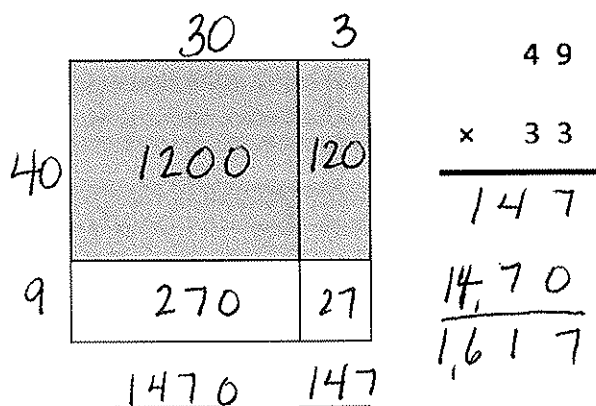
$$\begin{array}{r}
 41 \\
 \times 82 \\
 \hline
 82 \quad \text{2 ones} \times 41 \text{ ones} \\
 \hline
 3280 \quad \text{8 tens} \times 41 \text{ ones} \\
 \hline
 3,362
 \end{array}$$

2. Solve using the area model. Add the columns to record two partial products.

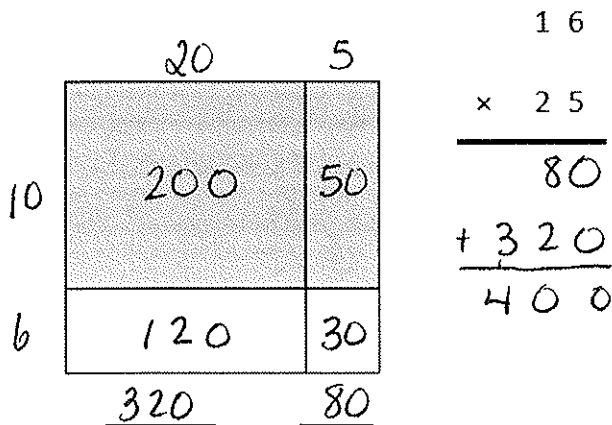
a. 68×23



b. 49×33



c. 16×25



d. 54×71

