



- Name _____ Date ____
- 1. Determine the perimeter and area of rectangles A and B. Include labels.



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



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



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



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



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





Name	Date

- 1. A rectangular porch is 4 feet wide. It is 3 times as long as it is wide.
 - a. Label the diagram with the dimensions of the porch.



- b. Find the perimeter of the porch. Include a label.
- P = _____
- 2. A narrow rectangular banner is 5 inches wide. It is 6 times as long as it is wide.
 - a. Draw a diagram of the banner and label its dimensions.

b. Find the perimeter **and** area of the banner. P = _____ A = _____

3. The area of a rectangle is 42 square centimeters. Its length is 7 centimeters. Draw and label this rectangle.

a. What is the width of the rectangle? W = _____

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

c. What is the perimeter of Charlie's second rectangle? P = _____

- 4. The area of Betsy's rectangular sandbox is 20 square feet. The longer side measures 5 feet. The sandbox at the park is twice as long and twice as wide as Betsy's.
 - a. Draw and label a diagram of Betsy's sandbox. What is its perimeter? P = _____
- b. Draw and label a diagram of the sandbox at the park. What is its perimeter? P = _____

c. What is the relationship between the two perimeters?

d. Find the area of the park's sandbox using the formula $A = I \times w$.

Area of the park's sandbox = _____

e. The sandbox at the park has an area that is how many times that of Betsy's sandbox?

The sandbox area = _____ times the area of Betsy's sandbox.

NYS COMMON CORE MATHEMATICS CURRICULUM	Lesson 4 Pro	oblem Set	4•3
Name	Date		



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

thousands	hundreds	tens	ones

a. 100 × 5 = _____

(10 × 5) × 10 = _____

100 x 5 ones = _____

thousands	hundreds	tens	ones

b. 1,000 × 5 = _____

(10 × 5) × 10 × 10 = _____

1,000 x 5 ones = _____

thousands	hundreds	tens	ones

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

a. 6 × 10 =	b×	6 = 600	c. 6,000 = _	× 1,000
d. 10 × 4 =	e. 4×	= 400	f	_×4 = 4,000
g. 1,000 × 9 =	_ h=	10 × 9	i. 900 =	× 100

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

a. 10 × 12 = _____ 10 x (1 ten 2 ones) = _____

thousands	hundreds	tens	ones

b. 100 x 18 = _____ (10 × 18) × 10 = _____ 100 x (1 ten 8 ones)= _____

thousands	hundreds	tens	ones

c. 1,000 x 25 = _____

 $(10 \times 25) \times 10 \times 10 =$

1,000 x (2 tens 5 ones) = _____

thousands	hundreds	tens	ones

4. Decompose each multiple of 10, 100, or 1,000 before multiplying.

a. $3 \times 40 = 3 \times 4 \times$	c. 3 x 200 = 3 x x
= 12 ×	= ×
=	=
b. 4 × 4,000 = ××	d. 5 × 4,000 = × ×
= ×	=×
=	=



Name Date

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

1. 2 × 3 =

2 times _____ ones is _____ ones.

ones	

2. 2 × 30 =

2 times _____ tens is _____.

tens	ones

hundreds	tens	ones

3. 2 × 300 = _____

2 times ______ hundreds is ______ .

	thousands	hundreds	tens	ones
4. 2 × 3.000 =				

_____times ______thousands is _______.

5. Find the products.

a. 20 × 7 =	b. 3 × 60 =	c. 3 × 400 =	d. 2 × 800 =
e. 7 × 30 =	f. 60 × 6 =	g. 400 × 4 =	h. 4 × 8,000 =
i. 5 × 30 =	j. 5 × 60 =	k. 5 × 400 =	l. 8,000 × 5 =

6. Brianna bought 3 packs of balloons for a party. Each pack has 60 balloons. How many balloons does Brianna have?

 Jordan has twenty times as many baseball cards as his brother. His brother has 9 cards. How many cards does Jordan have?

8. The aquarium has 30 times as many fish in one tank as Jacob has. Jacob has9 fish. How many fish does the aquarium have?



Name _____

Date _____

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

1. To solve 20×40 , think:

(2 tens) × (4 tens) =
2 × 4 × 10 x 10 =

20 × 40 = _____

Hundreds	Tens	Ones

- 2. Use the word form of the numbers to find the products.
 - a. 2 tens × 4 tens = _____ hundreds
 - 20 x 40 = _____
 - b. 3 tens × 4 tens = _____ hundreds
 - 30 × 40 = _____
 - c. 2 tens × 5 tens = _____
 - 20 × 50 = _____
 - d. 4 tens x 8 tens = _____

40 x 80 = _____

- 3. Rewrite each equation in unit form and solve.
 - a. 20 x 20 = _____
 - 2 tens x 2 tens = _____ hundreds
 - b. 60 x 20 = _____
 - 6 tens x 2 _____ = ____ hundreds
 - c. 70 x 20 = _____
 - 7 _____ x 2 _____ = ____ hundreds
 - d. 70 x 30 = _____
 - _____ x ____ = ____ hundreds
 - e. 40 x 50 =

_____ × _____ = _____ -

f. 30 x 60 = _____

_____ X _____ = ____



- 1. Show partial products with disks on the place value chart, and record the partial products vertically as shown below.
 - a. 1×43

			4	3	
tens	ones	×		1	
		^		T	_
				3	(1x3)
			4	0	(1 x 40)
			4	3	

b. 2 × 43

tens	ones	

c. 3 × 43

hundreds	tens	ones

43

4 3

x 2

<u>x</u> 3

d. 4 × 43

hundreds	tens	ones

e. 2 × 36

hundreds	tens	ones

43

x 4

36

<u>x 2</u>

f. 3 × 69

hundreds	tens	ones
		P-1-

69

х З



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Name _____

Date _____

- 1. Represent the following expressions with disks that match the partial products.
 - a. 1×213

tens	ones
	tens

b. 2 × 213

hundreds	tens	ones

c. 3 × 214

thousands	hundreds	tens	ones

x 2

2 1 3

2 1 4 3

x 3

d. 3 × 1,254

thousands	hundreds	tens	ones

e. 2 × 4,036

thousands	hundreds	tens	ones

f. 3 × 2,546

thousands	hundreds	tens	ones

1	2	5	4

х	3
-	

4	0	3	6
Х			2

2	5	4	6
х			3

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Name _____

Date _____

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



2. Solve using the partial products and area model method. Kayla's school has 258 students. Janet's school has 3 times as many students as Kayla's. How many students are in Janet's school?

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

4 times as much as 467.

Solve any way.

4. 531 × 7

5. 3 times as many as 2,805.

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

Date _____





Name _____

- The table shows the cost of party favors. Each party guest receives a bag with 1 balloon, 1 lollipop, and 1 bracelet.
 - a. What is the total cost for 1 guest?

ltem	Cost
1 balloon	26¢
1 lollipop	14¢
1 bracelet	33¢

1 guest

b. What is the total cost for 9 guests?



Work Space:

<u>Area Model</u>



Partial Products



x	

2. The Turner family uses 148 liters of water per day. The Hill family uses 3 times as much water per day. How much water does the Hill family use per day?



- 3. Jayden has 347 marbles. Ellen has 4 times as many as Jayden. How many marbles does Ellen have?
 - a. Draw a tape diagram:

b. Use partial products to solve:



Jayden

Ellen

4. Write a word problem that would go with this drawing. Include a solution.



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Date _____

Solve the following problems using arrays.

Name _____

1. There are 19 identical socks. How many pairs of socks are there? Will there be any socks without a match? If so, how many?

If it takes 8 inches of ribbon to make a bow, how many bows can be made from 3 feet of ribbon (1 foot = 12 inches)? Will any ribbon be left over? If so, how much?

3. The library has 27 chairs and 5 tables. If the same number of chairs are placed at each table, how many chairs can be placed at each table? Will there be any extra chairs? If so, how many?

Solve using tape diagrams.

4. The baker has 42 kilograms of flour. She uses 8 kilograms each day. After how many days will she need to buy more flour?

5. Caleb has 76 apples. He wants to bake as many pies as he can. If it takes 8 apples to make each pie, how many apples will he use? How many apples will not be used?

6. Forty-five people are going to the beach. Seven people can ride in each van. How many vans will be required to get everyone to the beach?



Name _____

LESSON 16 PROBLEM SET

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

1. 7÷2



quotient = _____

remainder = _____



2. 27÷2

Tens	Ones	
		quotient =
		remainder =



3. 8÷3





remainder = _____



4. 38÷3

Tens	Ones	quotient = remainder =	Check Your Work

5. 6÷4



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 Name
 Date

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

1. 5 ÷ 2		Check Your Work
Ones	quotient =	
	remainder =	

2. 50÷2

Tens	Ones

auotient =
remainder =



3. 7÷3

Ones		Check Your Work
	quotient =	
	remainder =	

4. 75 ÷ 3



5. 9÷4



6. 92 ÷ 4

			Check Your Work
Tens	Ones		
		quotient =	
		remainder =	

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Name _____



Date _____

Solve using the Forgiving Method.





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Date _____



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



4 x ____ = 72

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



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



b.

4	40	24
---	----	----







=

d.

c.

5	100	45	
			= +

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Name _____

Date _____

b.

d.

1. Use number bonds to divide greater numbers.









a.

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

b.





48 ÷ 3 = _____





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1. Solve 37 ÷ 2 using an area model.



2. Solve 76 ÷ 3 using an area model.



37 ÷ 2= ____ r ____

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





Solve the following problems using the area model.



8. Seventy-three students are divided into groups of 6 students each. How many groups of 6 students are there? How many students will not be in a group of 6?



Name _____

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.	4	The factors of 4 are:	С
	$1 \times 4 = 4 \qquad 2 \times 2 = 4$	1,2, and 4	
b.	6	The factors of 6 are:	
с.	7	The factors of 7 are:	
d.	9	The factors of 9 are:	
e.	12	The factors of 12 are:	
f.	13	The factors of 13 are:	
g.	15	The factors of 15 are:	
h.	16	The factors of 16 are:	

i.	18	The factors of 18 are:
j.	19	The factors of 19 are:
k.	21	The factors of 21 are:
Ι.	24	The factors of 24 are:

2. Sheila has 28 stickers to divide evenly among 3 friends. She thinks there will be no leftovers. Use what you know about factor pairs to explain if Sheila is correct.

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Name _____ Date _____

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

a. Is 2 a factor of 84?	b. Is 2 a factor of 83?
c. Is 3 a factor of 63?	d. Is 2 a factor of 92?
e. Is 6 a factor of 84?	f. Is 4 a factor of 88?
g. Is 5 a factor of 84?	h. Is 8 a factor of 92?

- 1. Use the associative property to find more factors of 24 and 36.
 - a. $24 = 12 \times 2$ b. $36 = _$ × 4

 $= (_ \times 3) \times 2$ $= (_ \times 3) \times 4$
 $= _ \times (3 \times 2)$ $= _ \times (3 \times 4)$
 $= _ \times 6$ $= _ \times 12$
 $= _$ $= _$
- 2. Use the Forgiving Method of division to show that 4 is a factor of 56, 72, and 80.

 $56 \div 4$ $72 \div 4$ $80 \div 4$



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 Image: Comparison of the state of



Name	Date

- 1. List the numbers that have 24 as a multiple.
- 2. Use mental math, division, or the associate property to solve.
 - a. Is 12 a multiple of 4? _____ Is 4 a factor of 12? _____
 - b. Is 42 a multiple of 8? _____ Is 8 a factor of 42? _____

c. Is 84 a multiple of 6? _____ Is 6 a factor of 84? _____

3. Can a prime number be a multiple of any other number except 1 or itself? Explain your reasons why.

4. 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. Circle in red the multiples of 2. When a number is a multiple of 2, what are the possible values for the ones digit?
- b. Shade in green the multiples of 3. Choose one. What do you notice about the sum of the digits? Choose another. What do you notice about the sum of the digits? _____
- c. Circle in blue the multiples of 5. When a number is a multiple of 5, what are the possible values for the ones digit?
- d. Draw an X over the multiples of 10. What digit do all multiples of 10 have in common? What is the digit?



Name	Date	

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

a. 6÷2=	1 1 1	1 1 1
6 ones ÷ 2 =ones		_
b. 60 ÷ 2 =		
6 tens ÷ 2 =	-	
c. 600 ÷ 2 =		
÷2 = _		
d. 6,000 ÷ 2 =		
÷2 = _		
e. 9÷3=		
2 2		
5 ones : 5ones		
f. 90 ÷ 3 =		
	÷3 =	
g. 900 ÷ 3 =		
J		

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

a. 800 ÷ 2 = 400 8 hundreds ÷ 2 = 4 hundreds	b. 600÷2	c. 800 ÷ 4
d. 300 ÷ 6 30 tens ÷ 6 = tens	e. 240÷4	f. 450 ÷ 5
g. 3,600 ÷ 4 36 hundreds ÷ 4 = hundreds	h. 2,400÷4	i. 2,400÷3

Draw tape diagrams to solve.

4. Some sand weighs 2,800 kilograms. It is divided equally between 4 trucks. How many kilograms of sand are in each truck?

5. Ivy has 5 times as many stickers as Adrian has. Ivy has 350 stickers. How many stickers does Adrian have?



Name _____

Date _____

1. Divide using the forgiving method.





2. Zach filled 581 one-liter bottles with apple cider. He distributed the bottles evenly to 4 stores. How many liter bottles did each of the stores receive? Were there any bottles left over? If so, how many?



Date _____

1. Divide using the Forgiving Method.

Name _____







Name _____ Date _____

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

1. Monique needs exactly 4 plates on each table for the banquet. If she has 312 plates, how many tables is she able to prepare?



_____ group size unknown

2. 2,365 books were donated to an elementary school. If 5 classrooms shared the books equally, how many books did each class receive?



- _____ group size unknown
- _____ number of groups unknown

_____ number of groups unknown

3. If 1,503 kilograms of rice was packed in sacks weighing 3 kilograms each, how many sacks were packed?

_____ group size unknown

_____ number of groups unknown

4. Rita made 5 batches of cookies. There were a total of 2,400 cookies. If there were the same number of cookies in each batch, how many cookies were in each batch?



____ group size unknown

____ number of groups unknown

Lesson 32 Problem Set 4•

9999 8482-846

Name _____

Date ____

Use the forgiving method of division to solve.

 A concert hall contains 8 sections of seats with the same number of seats in each section. If there are 248 seats, how many seats are in each section?

2. In one day, the bakery made 719 bagels. The bagels were divided into 9 equal shipments. A few bagels were left over and given to the baker. How many bagels did the baker get?



3. The sweet shop has 614 pieces of candy. They packed the candy into bags with 7 pieces in each bag. How many bags of candy did they fill? How many pieces of candy were left?

4. There were 904 children signed up for the relay race. If there were 6 children on each team, how many teams were made? The remaining children served as referees. How many children served as referees?

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Date Name _____

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

1. 20 × 22



2. 50 × 41



×

×

Draw an area model to represent the following expressions in standard form.

Record the partial products vertically and solve.

3. 80 × 32



4. 70 x 54



Solve using partial products.

5. 30 × 68

6. 60 × 34

×

×

Lesson 36 Problem Set NYS COMMON CORE MATHEMATICS CURRICULUM Date Name _____ 1. Write the expression shown by these area models. ______ x ______ 10 2 10 4 Use the distributive property to find the product. $14 \times 12 = (10 \times __) + (10 \times __) + (4 \times __) + (4 \times __)$ 14 x 12 = _____ + _____ + _____ + _____ 14 x 12 = _____

- 2. Use an area model to represent the following expressions. Record the partial products and solve.
 - a. 22 × 14

2 2 × 14

+





Draw an area model to solve. Record the partial products vertically and solve. 3. 25×32





4. 35 × 42

 		×
	+	
]	

Solve using four partial products.

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Name

Date _____

1. Solve 12 × 14 using 4 partial products and 2 partial products.



2.



2. Solve 43×32 using the area model. Add cloumns to record two partial products.



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

a. 57 × 15

b. 46 x 35

