Table of Contents

Multiplication

Combining equal groups.

By: _____

Factor

The numbers multiplied together to give a product.

3x4=12

Circle the factors in the multiplication problem below.

5x7=35

Product

The answer to a multiplication problem.

3x4=12

Circle the product in the multiplication problem below.

5x7=35

Multiple

The product of a number and other whole numbers.

Multiples of 4:

4, 8, 12, 16

Name the next three multiples of 4.

_____ _____ _____

Grouping Model

Shows the number of groups and the number in each group.

3x4=12
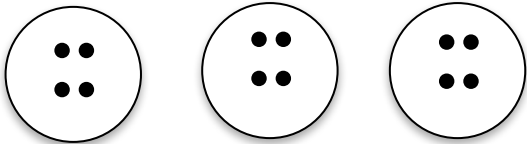
Make a grouping model for 5x3.

Array

Models a multiplication problem with rows and columns.

3x4=12

Make an array for 5x3.

Repeated Addition

Shows the relationship between multiplication and addition.

3x4=12

$$4 + 4 + 4 = 12$$

Add four three times.

Show how to use repeated addition to multiply 5x3.

Number Line

Shows how to skip count to multiply.

3x4=12

Show how to use a number line to multiply 5x3.

PREVIEW

Zero Property

Any number multiplied by zero equals zero.

$$3 \times 0 = 0$$

$6 \times 0 = \_\_\_\_\_$

$0 \times 9 = \_\_\_\_\_$

$0 \times 2 = \_\_\_\_\_$

$7 \times 0 = \_\_\_\_\_$

Identity Property

The product of any number and one is that number.

$$3 \times 1 = 3$$

$\_ \times 1 = \_\_\_\_\_$
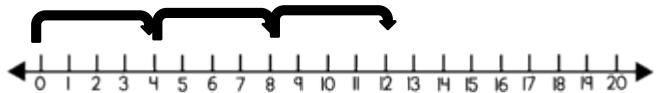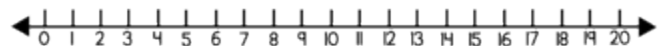
$1 \times \_ = \_\_\_\_\_$

$\_ \times 1 = \_\_\_\_\_$

$9 \times 1 = \_\_\_\_\_$

Commutative Property

When two numbers are multiplied together, the product is the same regardless of the order of the factors.

$$3 \times 4 = 12$$
$$4 \times 3 = 12$$

$5 \times 3 = 3 \times \_\_\_$ $6 \times 4 = \_\_\_ \times 6$

Associative Property

When three or more numbers are multiplied, the product is the same regardless of the grouping of the factors.

$$(3 \times 4) \times 2 = 24$$
$$3 \times (4 \times 2) = 24$$

$(5 \times 3) \times 2 = 5 \times (3 \times \_\_\_)$

Name _____

Color the Array
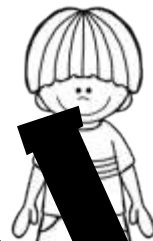
Color an array to match the multiplication fact.

6X7=

5X3=

4X8=

7X9=

3X6=

9X5=

Read a Number Line

Write a multiplication fact for each model of multiplication of the number lines below.
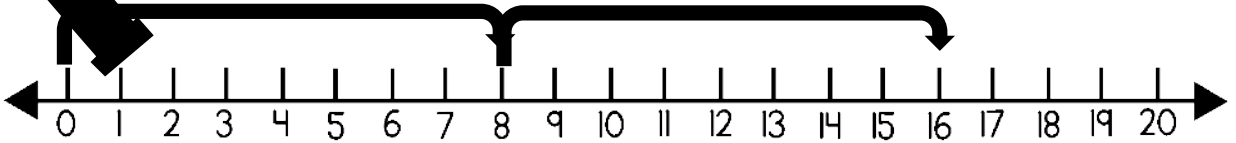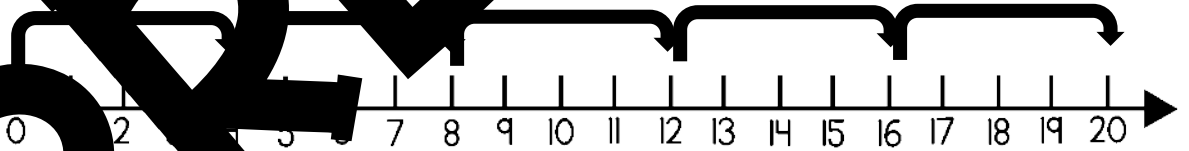
Name _____

Representing Multiplication

Grouping Model:

Repeated Addition:
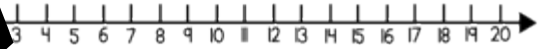
Equation

3x6

Array:

Number Line:

3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Grouping Model:

Repeated Addition:

Equation

5x4=

Array:

Number Line:

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
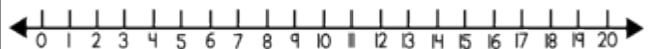
Color by Number

Directions: Color the picture using the key below

Products of:
12-brown
16-blue
18-red
20-yellow

2x10

6x3

4x3

3x6

2x6

8x2

2x9

4x5

4x3

3x4

2x8

4x4

Name _____

SPIN and COLOR

Products of 20 and Less

Use a paperclip and pencil to make a spinner. Spin the spinner two times and multiply the numbers together. Color the product. If playing with a partner, the first person to color three in a row wins!

Spinner: 2, 4, 5, 2, 4, 1
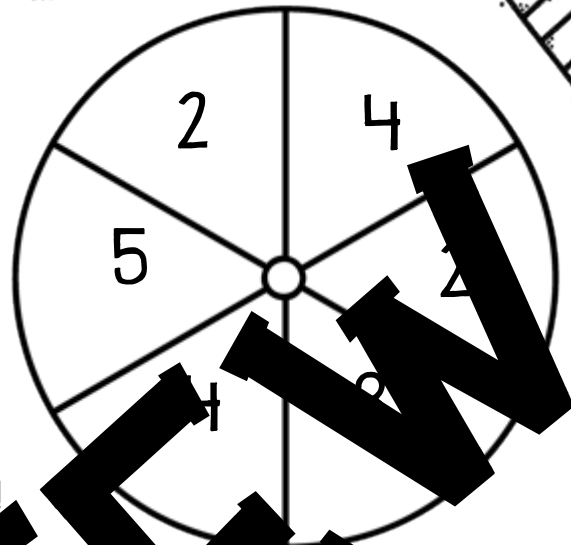
4	8	10		12
4		15	20	16
	4	8	4	6
20	8	10	6	10
16	12	16	15	12

Name _____

Multiplication Graphing

Directions: Solve each multiplication problem. Fill out the graph below to show how many times each product appeared.

8x5=	4x9=	6x6=	6x5=	4x9=
2x12=	5x8=	9x4=	4x9=	8x3=
6x5=	2x12=	5x8=		6x5=
8x3=	6x4=	5=	8x3=	6x6=

10

9

8

7

4

3

2

1

24   **30**   **36**   **40**
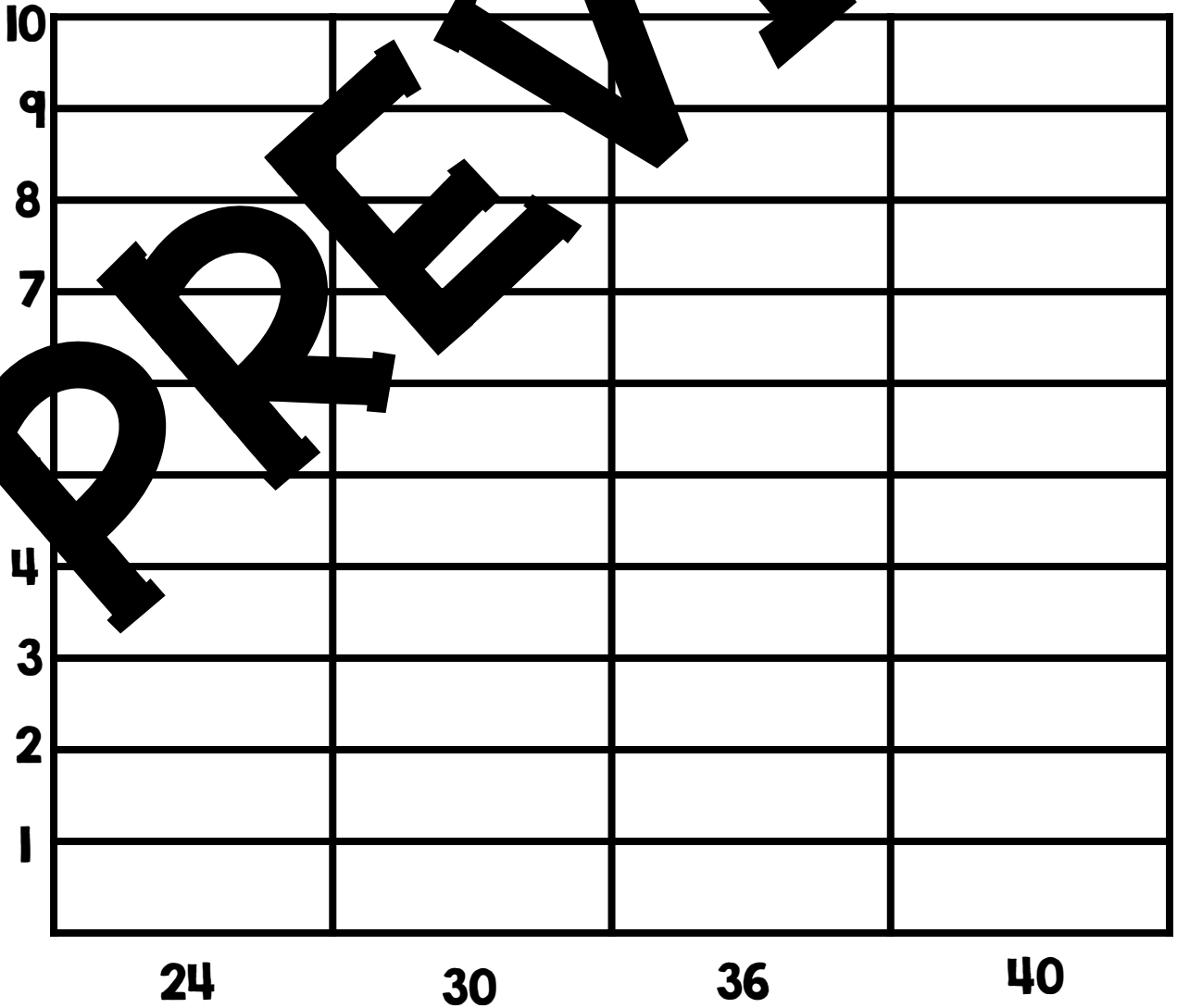
Multiples of Two
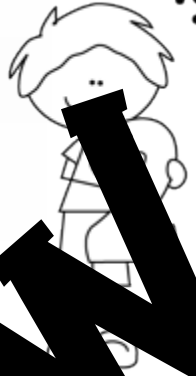
Directions: Roll one die. Multiply the number by 2 and color the product. If playing with a partner, the first person to color three in a row wins!

2	10	12			2
8	4	2	8	4	2
5		6	6	12	12
	2	8	8	4	10
2	10	4	6	10	8
12	9	18	16	20	12

Name _____

Roll and Color

Directions: Roll a die and skip count by that number until you reach 100 or as close as you can get to 100.

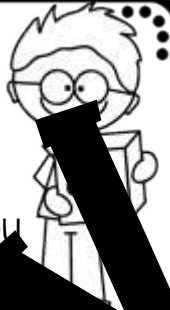| 1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
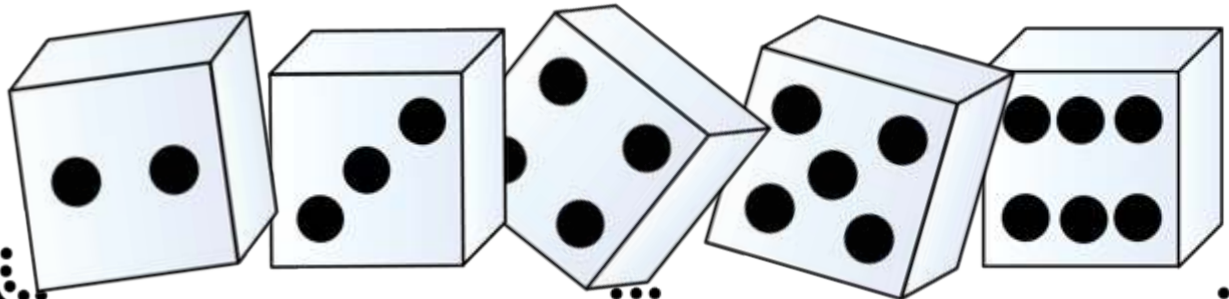
Name _____

Skip Counting

Show how to skip count by 2, 3, 4, and 5 on the hundreds charts.

Skip count by 2.

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		
61	62	63	64	65	66		69		
71	72	73	74	75			78	79	80
81	82	83	84	85			88		90
91	92	93							

Skip count by 3.

1	2		4	5	6	7	8		
		14	15		17	18	19	20	
		23			26		28	29	30
31		34				37	38	39	40
41	42		44	45	46	47	48	49	50
51	52	53		55	56	57	58	59	60
	62	63	64	65	66	67	68	69	70
	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

Skip count by 4.

1	2		4		6		8	9	10
	12		14	15		17	18	19	20
		23	24	25	26	27	28	29	30
31		33	34	35	36	37	38	39	40
41	42		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

Skip count by 5.

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

Comparing Numbers

Compare the equations with a <, >, = symbol.

6x4 ☐ 3x5	4x3 ☐ 5x3	0x2 ☐
7x3 ☐ 4x6	6x3 ☐ 9x	x7 ☐ 6x5
6x6 ☐ 4x9	7x ☐ x6	8x8 ☐ 6x9
6x ☐ 7x	9 ☐ 7x9	6x4 ☐ 2x12
9x ☐	3x5 ☐ 4x6	7x9 ☐ 8x8
6x ☐ 5x9	4x10 ☐ 8x5	8x8 ☐ 7x9
4x10 ☐ 5x4	4x9 ☐ 9x4	8x4 ☐ 9x3

Name _____

Input-Output Tables

Complete the input-output tables below.

Rule: multiply by 2

input	output
2	
3	
4	
5	
6	

Rule: multiply by 5

input	output
2	
6	

Rule: multiply by 4

input	output
5	
6	
7	
8	

input	output
	6
3	9
4	
5	
6	

input	output
3	15
4	
5	25
6	
7	

input	output
20	
40	
60	
80	240
100	300
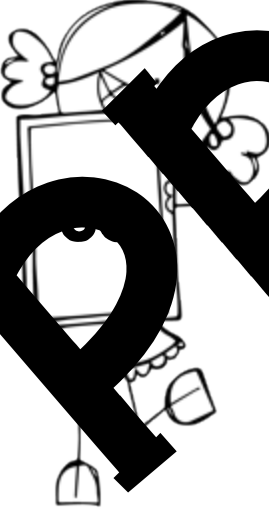
Name _____

Cut & Paste Arrays
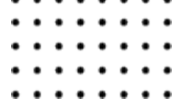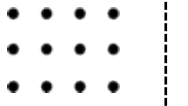
Cut out and glue the arrays to match the product.

12	

24	

40	

multiplication table

Fill in the missing numbers in the multiplication table.

×	1	2	3	4	5	6	7	8	9	10	11	12
1		2									11	
2	2				10							24
3			9				21			30		
4	4					24						
5		10						40				60
6				24							66	
7					35				63			
8			24			48						96
9	9						63			90		
10			30					80				
11	11							88			121	132
12		24		48			84				132	

Name _____

Name _____

Multiplication Word Problems

Solve each word problem with a number sentence and picture.

|	
There are three baskets of apples, with eight apples in each basket. How many apples are there?	There are five baseball teams, with nine players on each team. How many baseball players were there?
Molly, Samir, and Alex each had six pencils. How many pencils did they have?	Write a multiplication word problem to represent four groups of three.

Number Bonds

Complete the number bonds.

Name _____

PREVIEW

5 — 40

6 — 30

8 — 72

4 — 28

— 81

9 — 36
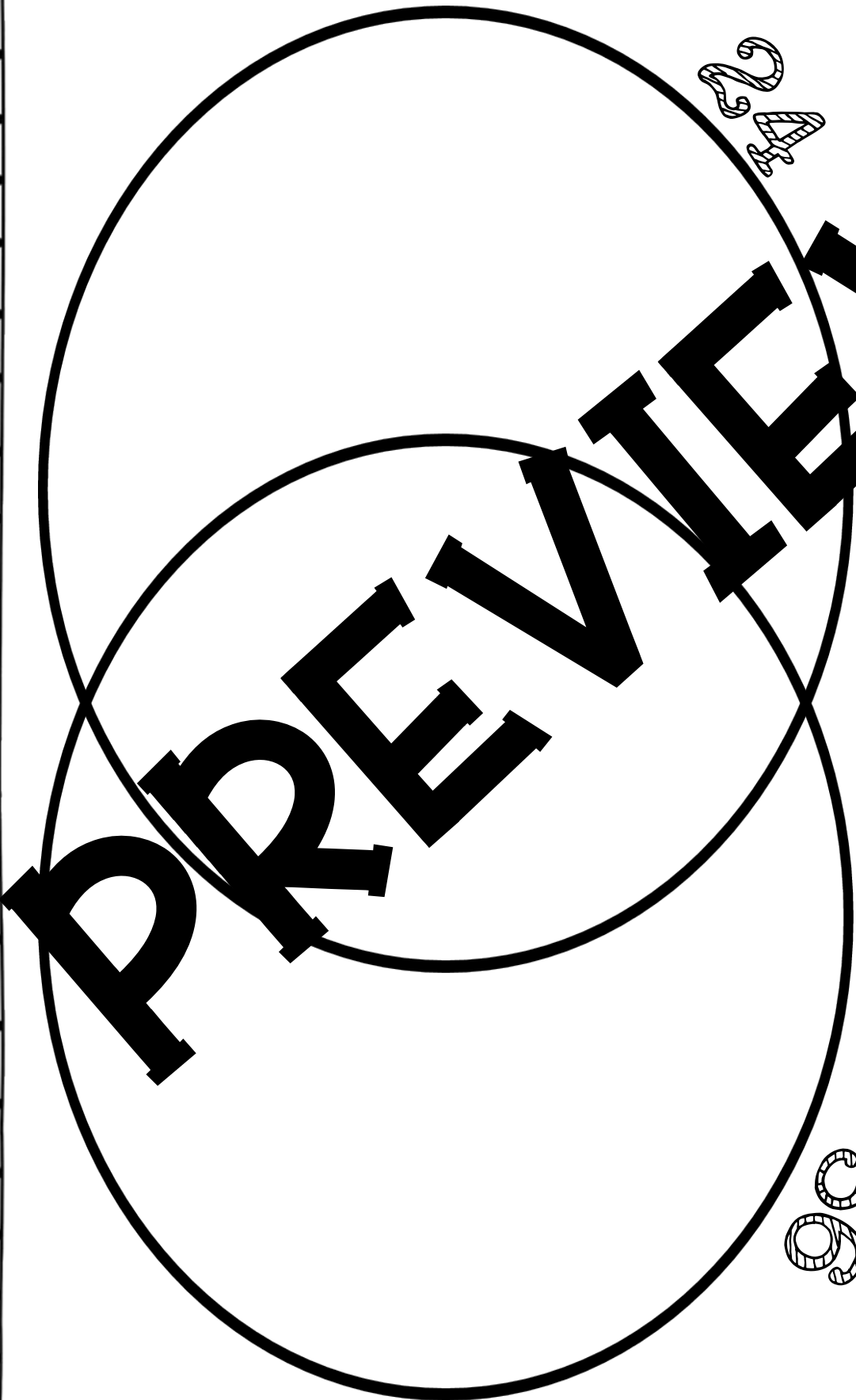
6 — 48

9 — 54

4 — 32
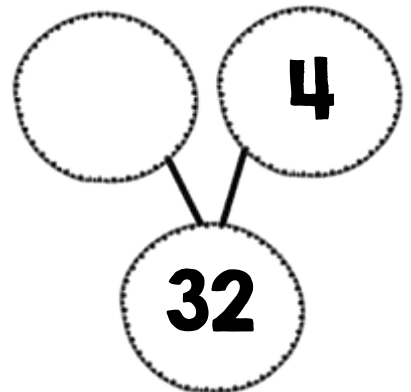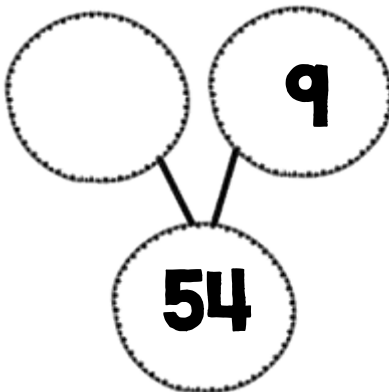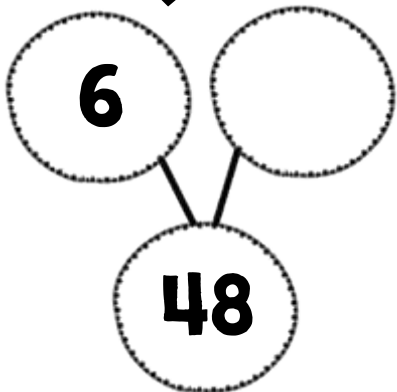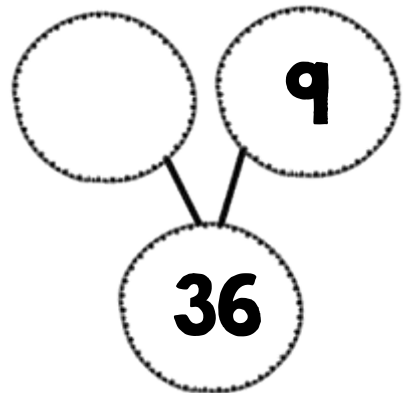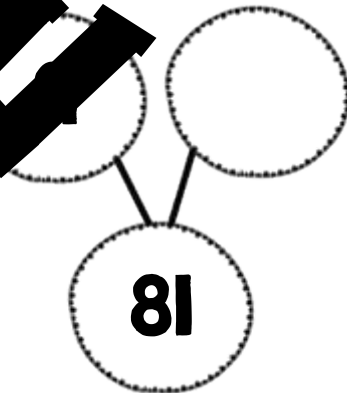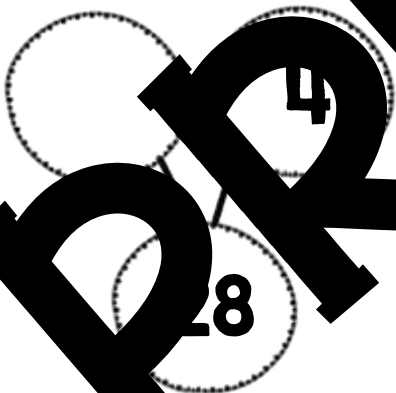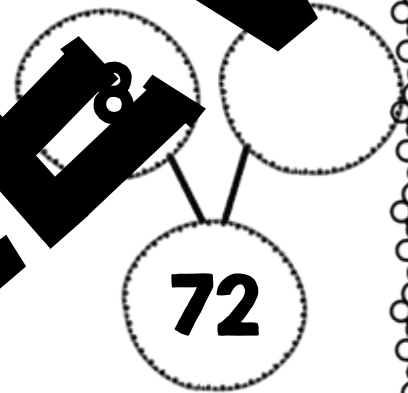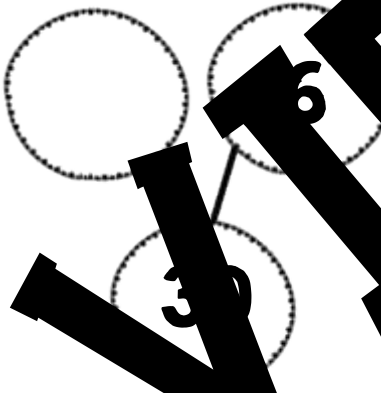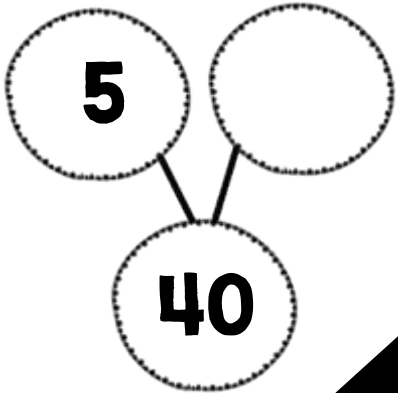
Name _____

Comparing Factors

Compare and contrast the factors of 24 and 36.

24

36

Name _____

Properties of Multiplication

Property of Zero-anything multiplied by zero equals zero.

3x0=_____   0x6=_____   9x0=___

0x1=_____   5x0=_____   0x_=_____

Identity Property-anything multiplied one equals that number.

4x1=_____   1x7=_____   6x_____

0x1=_____   _x1=____   x10=_____

Commutative Property-When two numbers are multiplied together, the product is the same regardless of the order of the factors.

Use the commutative property to show how to change the order of the factors.

_x2=_____   8x7=_____   6x5=_____

Use the commutative property to show solve the following problems.

_____, 5x4=____   3x6=18, 6x3=____   9x8=72, 8x9=____

Associative Property-When three or more numbers are multiplied, the product is the same regardless of the grouping of the factors.

Use the associative property to show how to change the order of the factors.

(3x5)x6=_____   (4x8)x9=_____   7x(5x2)=_____

Use the associative property to show solve the following problems.

(4x3)x7=84, 4x(3x7)=____   6x(3x2)=72, (6x3)x2=____