Name _____

3rd Grade Modified Math Remote Learning Packet

Week 1

September 21st – September 25th

Dear Educator,

My signature is proof that I have reviewed my scholar's work and supported him to the best of my ability to complete all assignments.

_____ _____

(Parent Signature) (Date)

Parents please note that all academic are also available on our website at www.brighterchoice.org under the heading "Remote Learning." All academic packet assignments are mandatory and must be completed by all scholars.

Table Of Contents

Name: _____ Monday, September 21, 2020

BCCS-B College: _____

LEQ: How can I understand *equal groups of* as multiplication?

Objective: I can use repeated addition to understand *equal groups of* as multiplication.

Vocabulary:

- Repeated addition **2+2+2**
- Multiplication **2X3=6**
- Sum **2+2 =4 (4 is the sum)**
- Product **2x2=4 (four is the product)**

Name: _____ Monday, September 21, 2020

BCCS-B College: _____

Do Now:

Add to find the sum of each addition sentence below. Write the sum on the blank.

Example 2+2+2= 6	**a.** 3+3= ____	**b.** 1+1+1+1= ____
c. 2+2= ____	**d.** 3+3+3= ____	**e.** 5+5= ____
f. 5+5+5= ____	**g.** 2+2+2+2= ____	**h.** 4+4= ____
i. 6+6= ____	**j.** 4+4+4= ____	**k.** 5+5+5+5= ____

Name: _____ Monday, September 21, 2020

BCCS-B College: _____

Input:

Repeated addition can help us understand_____.

2+2+2+2 is the same as 4x **2** because there are 4 equal groups of **2** in both cases. The sum and **product** is 8.

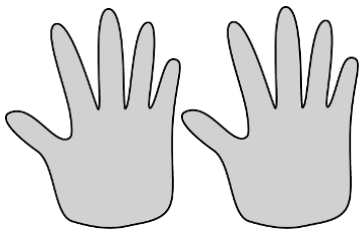
Repeated Addition

____ + ____ + ____ + ____ = ____

Multiplication

Number of groups Size of each group _____

_____ x _____ = _____



2 groups of five = ___10__

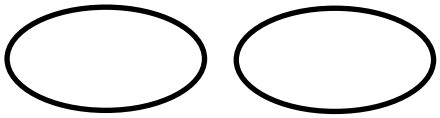
2 fives = _____

2 × 5 = _____

The picture below shows 2 groups of apples. Does the picture show 2 × 4? Explain why or why not.

The picture does not show 2 equal groups of 4. There are two groups of apples, but they are not equal.
We see one group of 4 and one group of 3.

2X4= _____



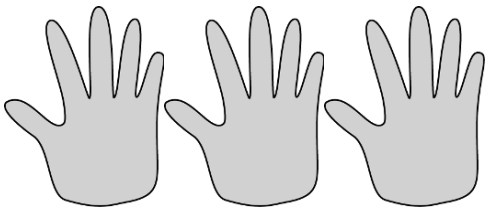
Name: _____ Monday, September 21, 2020

BCCS-B College: _____

Problem Set:

1.

a.



3 groups of five = ____15_____

3 fives = _____

3 × 5 = _____

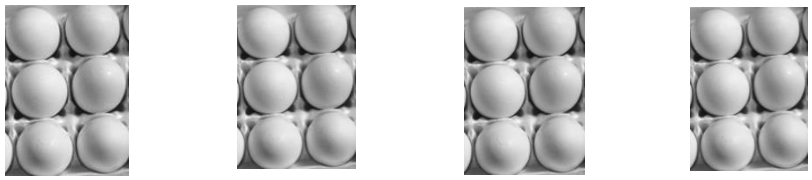
b.

3 + 3 + 3 + 3 + 3 = _____

5 groups of three = _____

5 × 3 = _____

c.



6 + 6 + 6 + 6 = _____

____4___ groups of six = _____

4 × _____ = _____

d.

4 +____ + ____ + ____ + ____ + ____ = _____

6 groups of _____ = _____

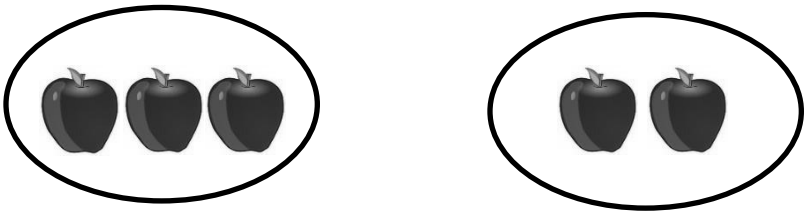
6 × _____ = _____

Name: _____ Monday, September 21, 2020

BCCS-B College: _____

2.

a. The picture below shows 2 groups of apples. Does the picture show 2 × 3? Explain why or why not.



This picture does/ does not show 2 x3.

_____

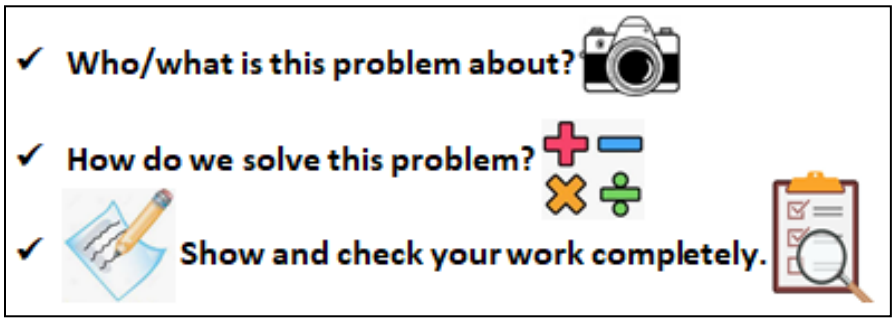
_____

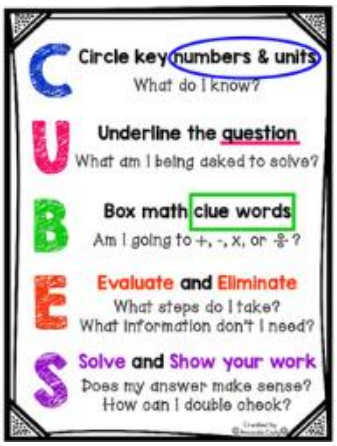
_____.

b. Draw a picture to show 2 × 3 = 6.

Name: _____ Monday, September 21, 2020

BCCS-B College: _____





Application:

Mrs. Mercado, Mrs. Page, and Ms. Maisenbacher each buy the same box of chocolate. Each box has **4 pieces of chocolate**. How many pieces of chocolate do they have in all?

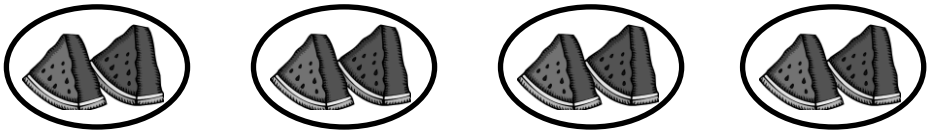
_____ + _____ + _____ = _____

Name: _____ Monday, September 21, 2020

BCCS-B College: _____

Exit Ticket:

1. The picture below shows 4 groups of 2 slices of watermelon. How many watermelons are there in all?



4 × _____ = _____

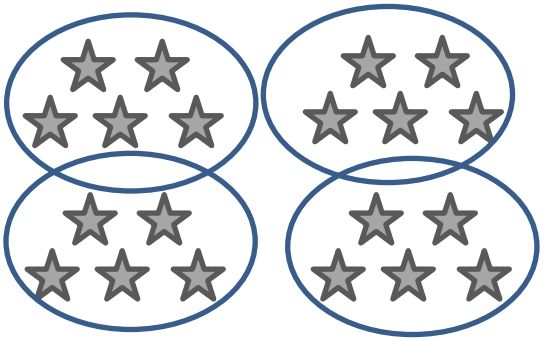
Name: _____ Monday, September 21, 2020

BCCS-B College: _____

Homework

Fill in the blanks to make true statements.

1.

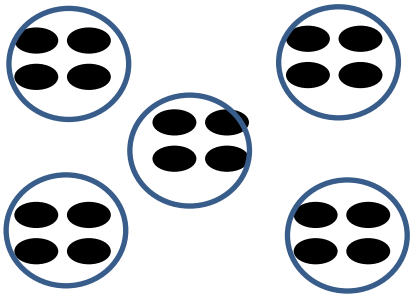


4 groups of five = ___**20**_____

4 fives = _____

4 × 5 = _____

2.

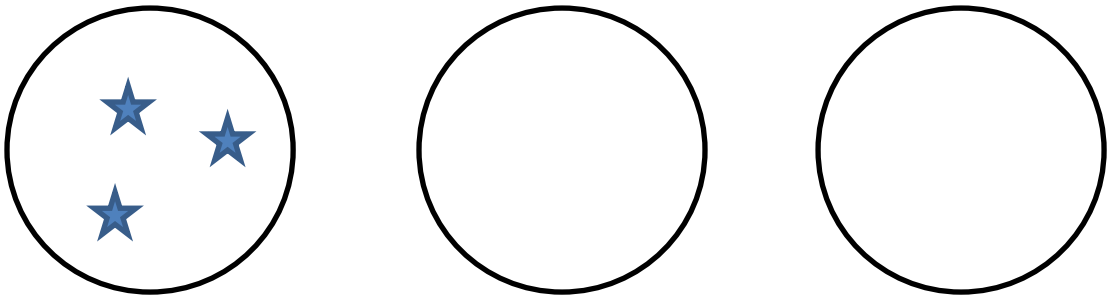


5 groups of four = _____

5 fours = _____

5 × 4 = _____

2. Draw a picture to show 3 + 3 + 3 = 9. Then, write a multiplication sentence to represent the picture.



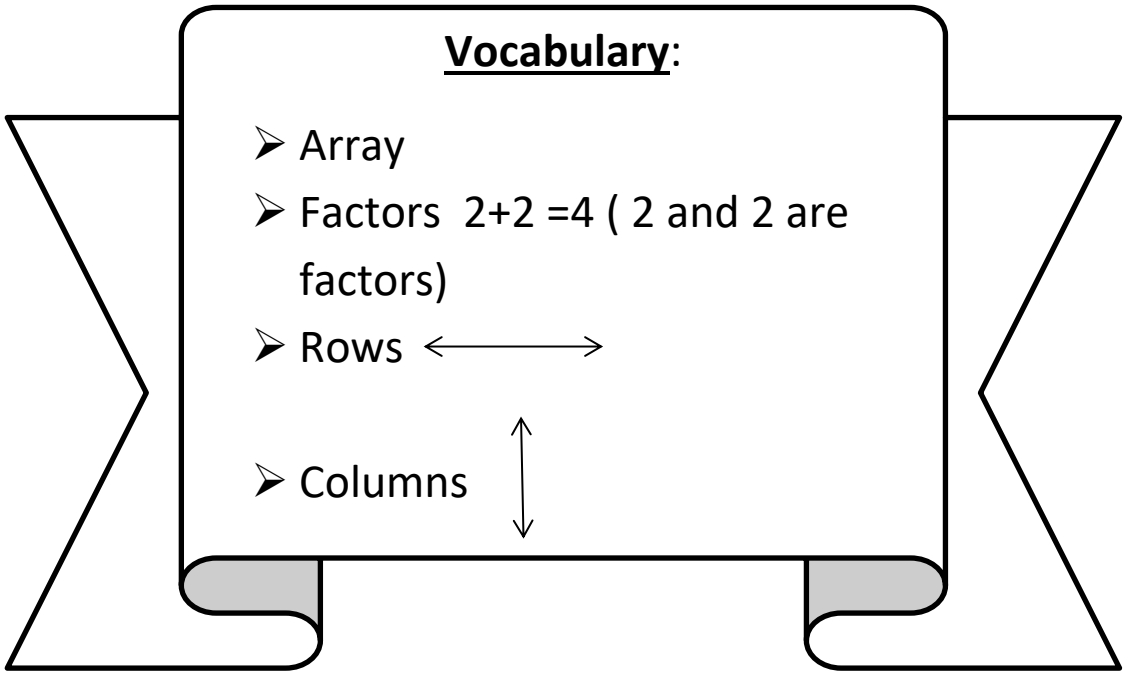
_____ X 3 = 9

Name: _____ Tuesday, September 22, 2020

BCCS-B College: _____

LEQ: How can I relate multiplication to the array model?

Objective: I can skip-count by the number of objects in each row to relate multiplication to the array model.



Name: _____ Tuesday, September 22, 2020

BCCS-B College: _____

Do Now: Look for the pattern

1.	**0 + 2 = 2**
2.	**2 + 2 =4**
3.	**4 + 2 =6**
4.	**6 + 2 =8**
5.	**8 + 2 =10**
6.	**10 + 2 =12**
7.	12 + 2 =
8.	14 + 2 =
9.	16 + 2 =
10.	18 + 2 =
11.	20 – 2 =
12.	18 – 2 =
13.	16 – 2 =
14.	14 – 2 =
15.	12 – 2 =
16.	10 – 2 =
17.	8 – 2 =
18.	6 – 2 =
19.	4 – 2 =
20.	2 – 2 =
21.	2 + 0 =
22.	2 + 2 =

23.	2 + 4 =
24.	2 + 6 =
25.	2 + 8 =
26.	2 + 10 =
27.	2 + 12 =
28.	2 + 14 =
29.	2 + 16 =
30.	2 + 18 =
31.	0 + 22 =
32.	22 + 22 =
33.	44 + 22 =
34.	66 + 22 =
35.	88 – 22 =
36.	66 – 22 =
37.	44 – 22 =
38.	22 – 22 =
39.	22 + 0 =
40.	22 + 22 =
41.	22 + 44 =
42.	66 + 22 =
43.	888 – 222 =
44.	666 – 222 =

Name: _____ Tuesday, September 22, 2020

BCCS-B College: _____

Input:

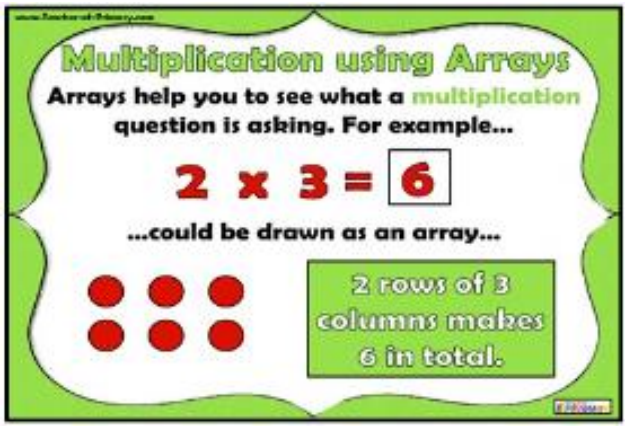
Arrays help us visualize _____. The _____ and the

_____each represent a _____. We multiply the rows and columns

to get the answer or the _____. In an array, the rows read from left

to right and the columns read up and down. The rows tell us the number of

groups and the columns tell the size of each group.

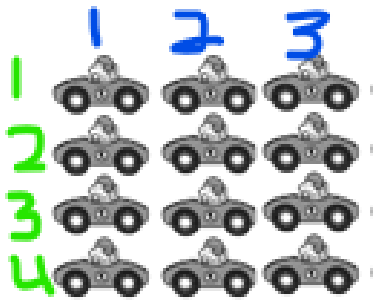


Writing a multiplication sentence from an array

Rows x Columns = Product

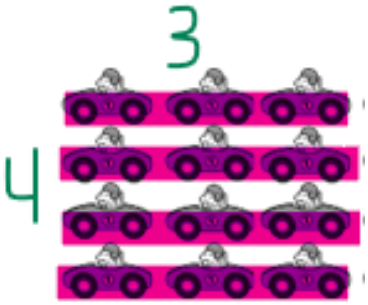
OR

R x C = P

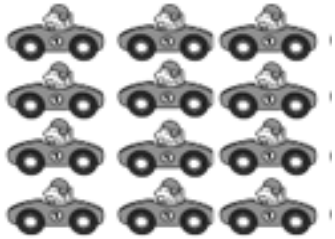


Rows: _____

Columns: _____



We say this as "_____ groups of _____"



R x C =P

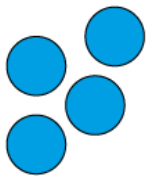
____ x ____ = ____

Name: _____ Tuesday, September 22, 2020

BCCS-B College: _____

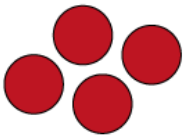
Input:

1. The dots below show 2 groups of 4.



a. Redraw the dots as an array that shows **2 rows of 4**. (think: what is the size of each group?) _____

_____



b. Compare the drawing to your array. Write at least 1 reason why they are the same and 1 reason why they are different.

One reason the array is the same is

_____

One reason the array is different

_____

_____.

2. Mrs. Page collects diamonds. She arranges them in **3 rows of 5**. Draw Mrs. Page's array to show how many diamonds she has altogether. Then, write a multiplication equation to describe the array.

_____

_____

_____

3

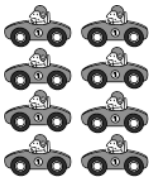
_____ X _____ = _____

Name: _____ Tuesday, September 22, 2020

BCCS-B College: _____

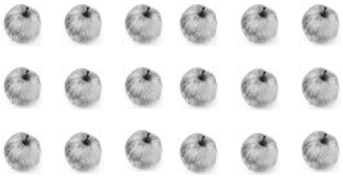
Problem Set:

Use the arrays below to answer each set of questions.

1. 

a. How many rows of cars are there? _____

b. How many cars are there in each row? _____

2. 

a. What is the number of rows? _____

b. What is the number of objects in each row? _____

3. 

a. There are **4 spoons** in each row.
How many spoons are in 2 rows? _____

b. Write a multiplication expression to describe the array.
_____ X _____=_____

4. 

a. There are **5 rows** of triangles. **How many triangles are in each row**?
_____

b. Write a multiplication expression to describe the total number of triangles. _____ X _____ = _____

Name: _____ Tuesday, September 22, 2020

BCCS-B College: _____

5. The dots below show 2 groups of 5.

a. Redraw the dots as an array that shows **2 rows of 5**.

_____

_____

b. Compare the drawing to your array. Write at least 1 reason why they are the same and 1 reason why they are different.

One reason that the array is the same is

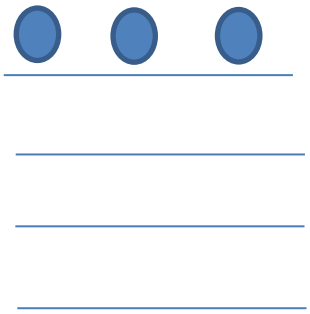
_____

One reason the array is different is

_____

_____

6. Mrs. Boomhower collects rocks. She arranges them in **4 rows of 3**. Draw Mrs. Boomhower's array to show how many rocks she has altogether. **Then, write a multiplication equation to describe the array.**

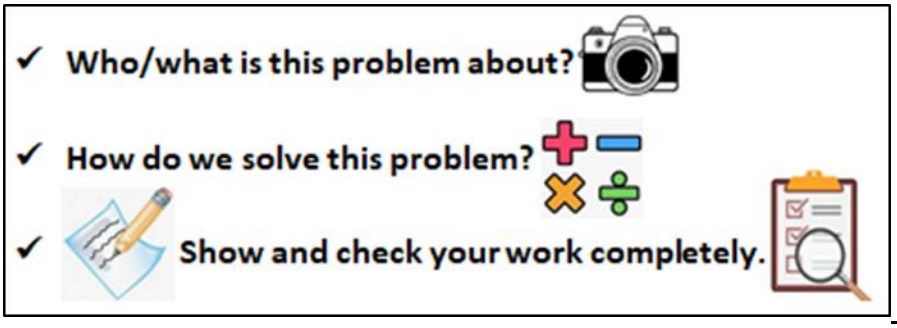


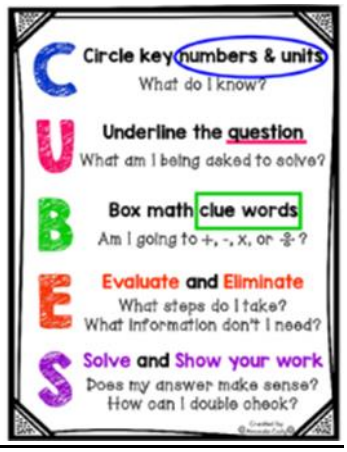
_____ X _____ = _____

7. Kenny organizes cans of food into an array. He thinks, "My cans show 5 × 3!" Draw Kenny's array to find the total number of cans he organizes.

Name: _____ Tuesday, September 22, 2020

BCCS-B College: _____





Application:

Jessie arranges her **20 books** as an array of equal groups on her bookcase. Jessie's **bookcase has four shelves**. Draw Jessie's array, then write a multiplication sentence to describe your array.

_____ X_____ =_____

Name: _____ Tuesday, September 22, 2020

BCCS-B College: _____

Exit Ticket:

1.  a. How many stars are in each row? _____

b. Write a multiplication equation to describe the array.

____X____=__12___

2. Mrs. McLean collects seashells. She arranges them in **3 rows of 6**. Write a multiplication equation to describe the array. Find the product (answer) to show the total number of seashells.

_____ **X** _____ **=** _____

Name: _____ Tuesday, September 22, 2020

BCCS-B College: _____

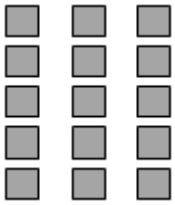
Homework

Use the arrays below to answer each set of questions.

1. 

a. How many rows of erasers are there? _____

b. How many erasers are there in each row? _____

2. 

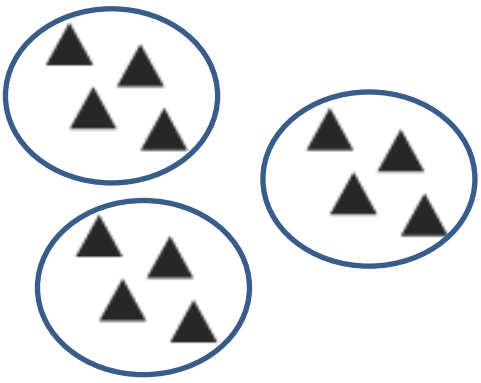
a. How many rows of squares are there? _____

b. How many squares are in each row? _____ (Hint: columns)

c. Write a multiplication expression to describe the array.

___X___=__15__

3. The triangles below show 3 groups of four. Redraw the triangles as an array that shows 3 rows of four in the box provided below.

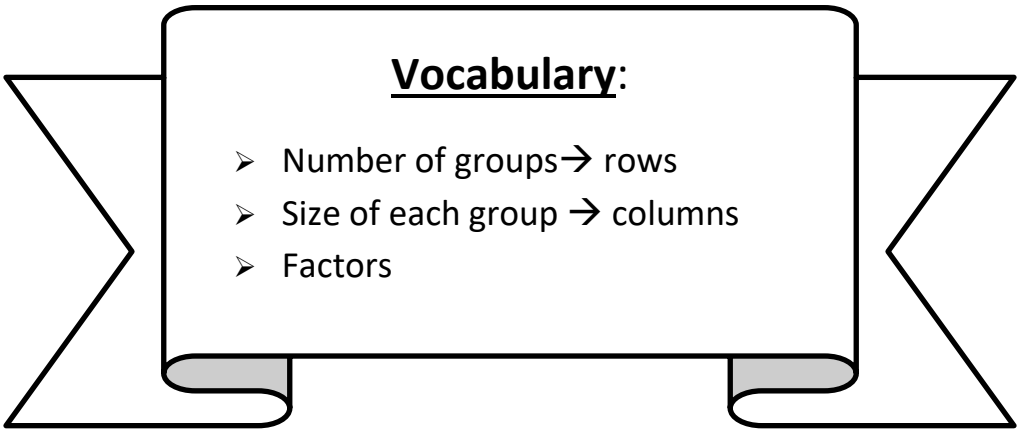


Name: _____ Wednesday, September 23, 2020

BCCS-B College: _____

LEQ: How can I interpret the meaning of factors?

Objective: I can attribute the number of groups to rows and the size of each group to columns to interpret the meaning of factors.



Name: _____ Wednesday, September 23, 2020

BCCS-B College: _____

Do Now:

1.	**5 + 5 = 10**
2.	**2 fives =10**
3.	**2 + 2 =4**
4.	**2 twos =4**
5.	5 + 5 + 5 =
6.	3 fives =
7.	5 + 5 + 5 + 5 =
8.	4 fives =
9.	2 + 2 + 2 =
10.	3 twos =
11.	2 + 2 + 2 + 2 =
12.	4 twos =
13.	2 threes =
14.	3 + 3 =
15.	2 sixes =
16.	6 + 6 =
17.	2 fours =
18.	4 + 4 =
19.	5 fives =
20.	5 + 5 + 5 + 5 + 5 =
21.	5 twos =

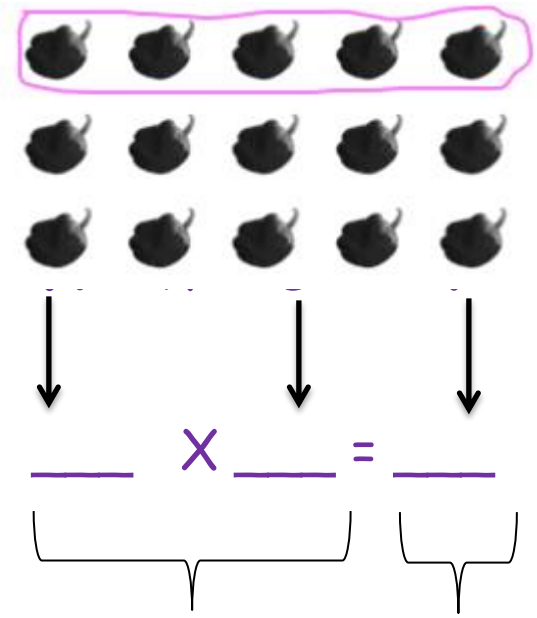
23.	8 + 8 =
24.	2 eights =
25.	7 + 7 =
26.	2 sevens =
27.	9 + 9 =
28.	2 nines =
29.	3 + 3 + 3 + 3 =
30.	4 threes =
31.	4 + 4 + 4 =
32.	3 fours =
33.	3 + 3 + 3 =
34.	3 threes =
35.	4 fives =
36.	5 + 5 + 5 + 5 =
37.	3 sevens =
38.	7 + 7 + 7 =
39.	3 nines =
40.	9 + 9 + 9 =
41.	3 sixes =
42.	6 + 6 + 6 =
43.	3 eights =

Name: _____ Wednesday, September 23, 2020

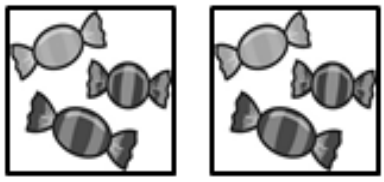
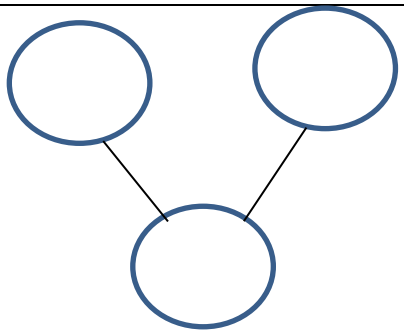
BCCS-B College: _____

Input:

The numbers that we multiply to get are product are the ___factors__. In an array, the rows and columns each represent one factor. The rows tell us the _number ___ of groups and the columns tell us the__size_ of each group. How many groups are in the array below? What is the size of each group?



_____ _____

Grouping	Array	Number Bond
 **2 groups of 3**	_____ _____ **____ groups of ____**	
_____ X _____ = _____		

Name: _____ Wednesday, September 23, 2020

BCCS-B College: _____

Input:

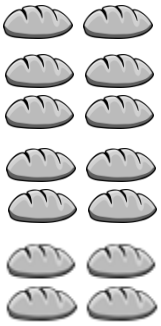
1. There are 5 flowers in each bunch. How many flowers are in 3 bunches?

a. Number of groups: _____ Size of each group: _____

b. 3 × 5 = _____

c. There are _____ flowers altogether. (skip count by 5)

2. There are _____ loaves of bread in each row. How many loaves of bread are there in 7 rows?

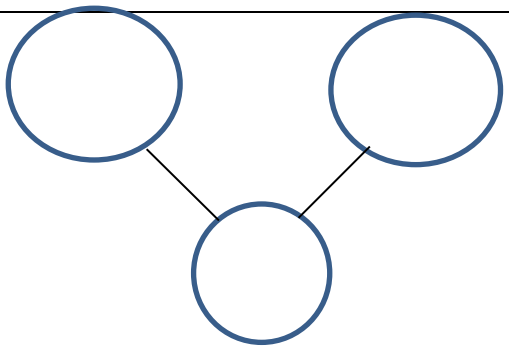


a. Number of rows: _____ Size of each row: _____

b. _____ × _____ = ____14_____

c. There are _____ loaves of bread altogether.

3. Draw an array that shows 3 rows of 5 squares. Then, show a number bond where each part represents the amount in one row.

Array	Number Bond
_____ _____ _____	

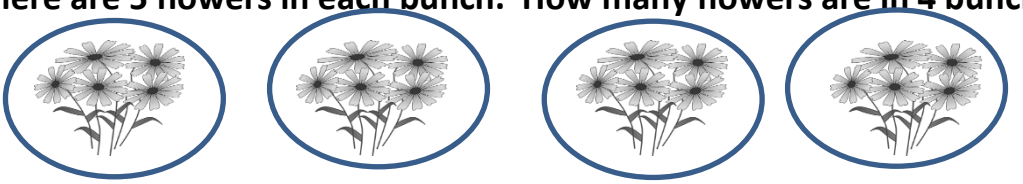
Name: _____ Wednesday, September 23, 2020

BCCS-B College: _____

Problem Set:

Solve Problems 1–4 using the pictures provided for each problem.

1. There are 5 flowers in each bunch. How many flowers are in 4 bunches?



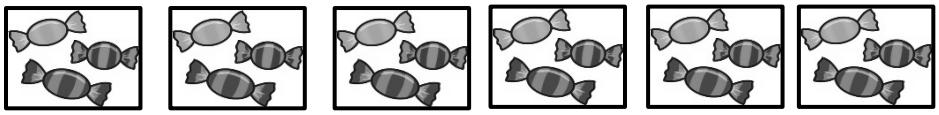
d. Number of groups: _____ Size of each group: _____

e. 4 × 5 = _____

f. There are _____ flowers altogether. (skip count by 5)

---

2. There are _____ candies in each box. How many candies are in 6 boxes?



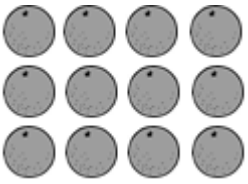
a. Number of groups: _____ Size of each group: _____

b. 6 × _____ = ____18_____

c. There are _____ candies **altogether**. +

---

3. There are 4 oranges in each row. How many oranges are there in _____ rows?



a. Number of rows: _____ Size of each row: _____

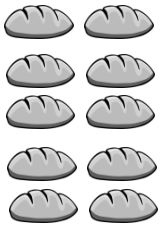
b. ___3_ × 4 = _____

c. There are _____ oranges **altogether**. +

Name: _____ Wednesday, September 23, 2020

BCCS-B College: _____

4. There are _____ loaves of bread in each row. How many loaves of bread are there in 5 rows?



a. Number of rows: _____ Size of each row: _____

b. _____ × _____ = _____

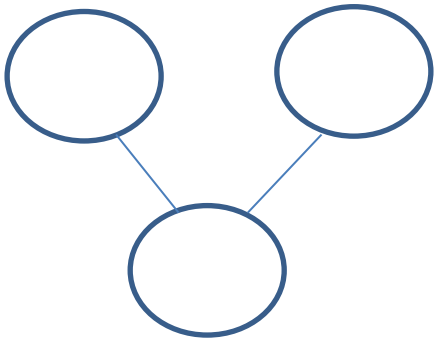
c. There are _____ loaves of bread altogether.

5. a. Write a multiplication equation for the array shown below.

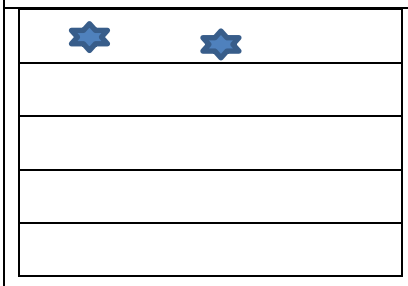
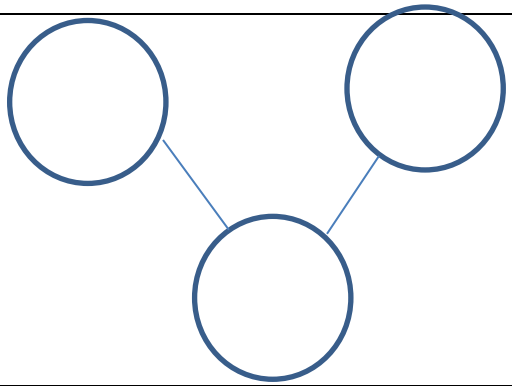
X X X
X X X
X X X
X X X

_____ X _____ = ___12__

b. Draw a number bond for the array where each part represents the amount in one row.

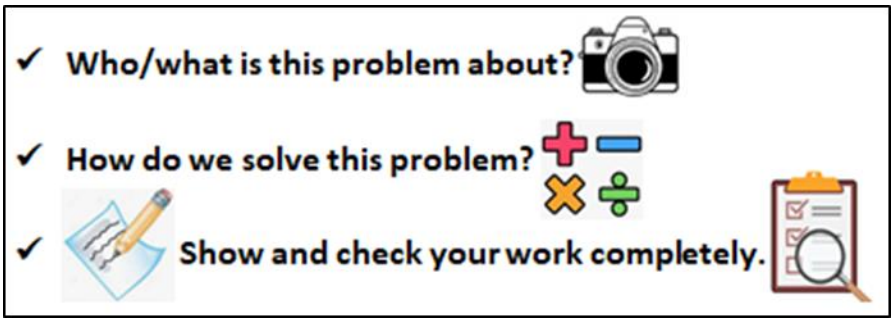


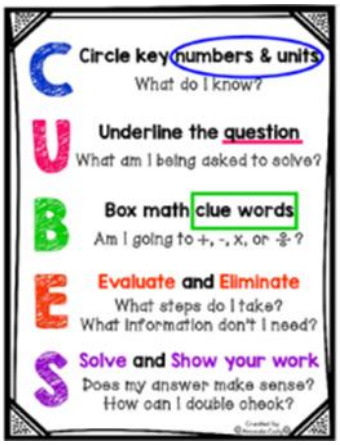
6. Draw an array that shows <u>5 rows of 2</u>. Then, show a number bond where each part represents the size of each group.

Array	Number Bond
	

Name: _____ Wednesday, September 23, 2020

BCCS-B College: _____





Application:

Abdullah is helping his mother decorate for a party. He places 12 cups on a table. There are 3 cups in each row. How many equal groups of cups did Abdullah set up?

_____

_____**How many cups in each row to equal 12?**

_____

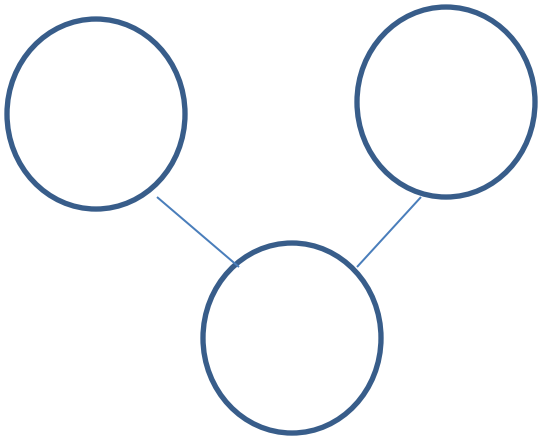
_____

Name: _____ Wednesday, September 23, 2020

BCCS-B College: _____

Exit Ticket:

Draw an array that shows **5 rows of 3 squares**. Then, show a number bond where each part represents the amount in one row. Write a multiplication equation to represent the problem.

Array	Number Bond
_____ _____ _____ _____ _____	

_____ X _____ = 18 (Product)

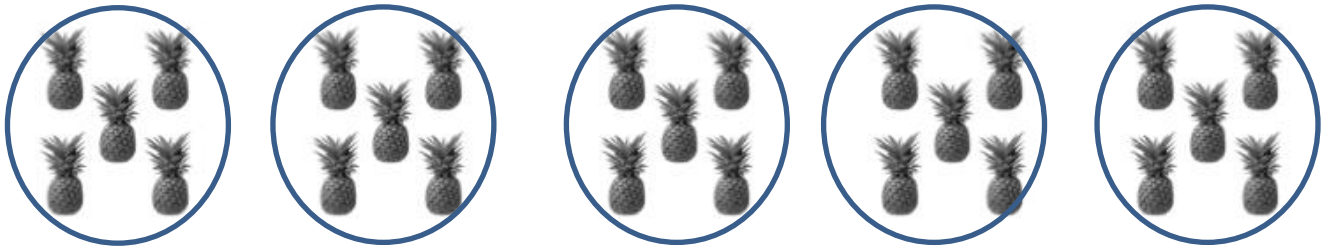
Name: _____ Wednesday, September 23, 2020

BCCS-B College: _____

Homework

Solve Problems 1–4 using the pictures provided for each problem.

1. There are 5 pineapples in each group. How many pineapples are there in 5 groups?

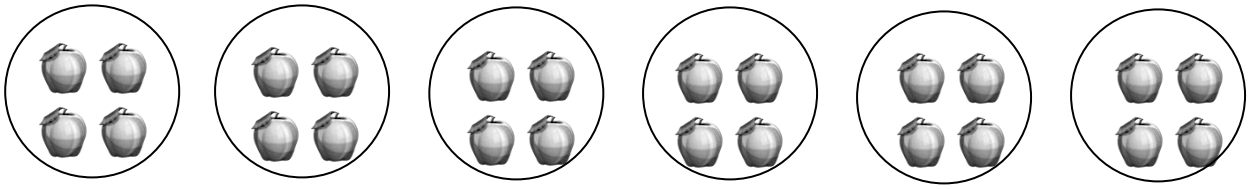


a. Number of groups: _____ Size of each group: _____

b. 5 × 5 = _____ **c**. There are _____ pineapples ***altogether***.

---

2. There are _____ apples in each basket. How many apples are there in 6 baskets?

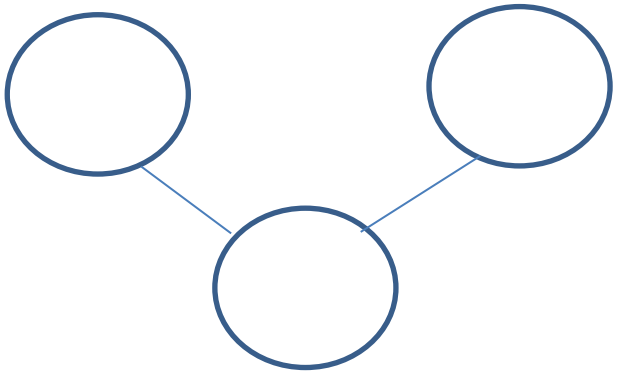


a. Number of groups: _____ Size of each group: _____

b. 6 × _____ = 24 **c**. There are _____ apples ***altogether.***

---

3. Draw an array that shows **4 rows of 2 squares**. Then, show a number bond where each part represents the amount in one row.

Array	Number Bond
_____ _____ _____ _____	

Name: _____ Thursday, September 24, 2020

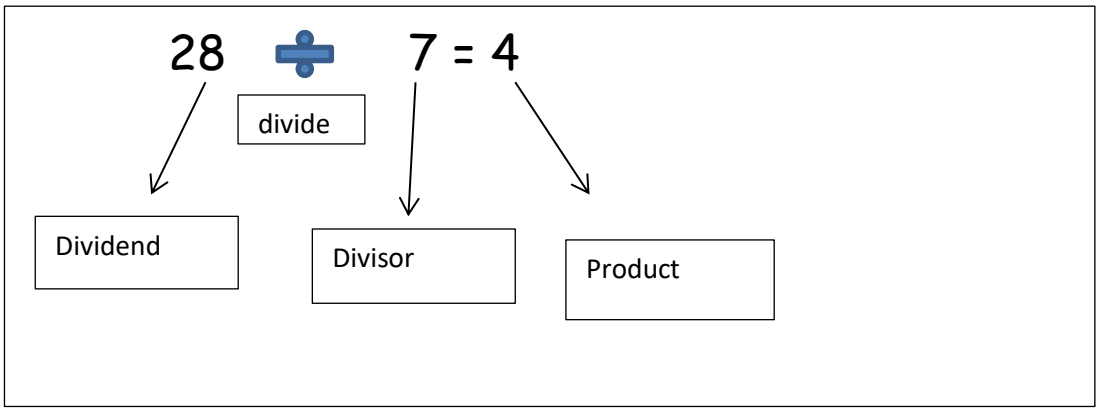
BCCS-B College: _____

LEQ: How can I understand the meaning of the unknown as the size of the group in division?

Objective: I can count the number of objects in each group to understand the meaning of the unknown as the size of each group in division.

Vocabulary:

- Divide
- Divisor
- Dividend
- Quotient
- Unknown



Name: _____ Thursday, September 24, 2020

BCCS-B College: _____

Do Now:

Use your knowledge of repeated addition to multiply.

23.	**5 + 5 + 5 = 15**
24.	**3 × 5 = 15**
25.	**5 × 3 = 15**
26.	2 + 2 + 2 =
27.	3 × 2 =
28.	2 × 3 =
29.	5 + 5 =
30.	2 × 5 =
31.	5 × 2 =
32.	2 + 2 + 2 + 2 =
33.	4 × 2 =
34.	2 × 4 =
35.	2 + 2 + 2 + 2 + 2 =
36.	5 × 2 =
37.	2 × 5 =
38.	3 + 3 =
39.	2 × 3 =
40.	3 × 2 =
41.	5 + 5 + 5 + 5 =
42.	4 × 5 =
43.	5 × 4 =
44.	2 × 2 =

45.	3 + 3 + 3 + 3 =
46.	4 × 3 =
47.	3 × 4 =
48.	3 + 3 + 3 =
49.	3 × 3 =
50.	3 + 3 + 3 + 3 + 3 =
51.	5 × 3 =
52.	3 × 5 =
53.	7 + 7 =
54.	2 × 7 =
55.	7 × 2 =
56.	9 + 9 =
57.	2 × 9 =
58.	9 × 2 =
59.	6 + 6 =
60.	6 × 2 =
61.	2 × 6 =
62.	8 + 8 =
63.	2 × 8 =
64.	8 × 2 =
65.	7 + 7 + 7 + 7 =
66.	4 × 7 =

Name: _____ Thursday, September 24, 2020

BCCS-B College: _____

Input:

If I bought 10 markers that I wanted to share or divide with Mrs. Mercado equally, I would get 5 markers and Mrs. Mercado would also get _____markers**.**

I _____10 into 2 equal groups.

To **divide** means to break up in bigger number into smaller, equal groups. If I kept 6 markers and gave 4 to Mrs. Mercado that would **not** be division because my groups are not equal. The number of markers that Mrs. Mercado received was a mystery or _____ until we counted the size of the group. We write this as 10÷2= 5.

10 ÷ 2 = 5

_____ _____ _____

(total number of markers) (number of groups) (size of each group)

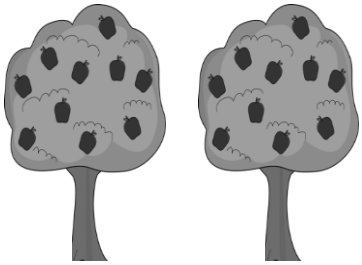
Name: _____ Thursday, September 24, 2020

BCCS-B College: _____

Input:

answer

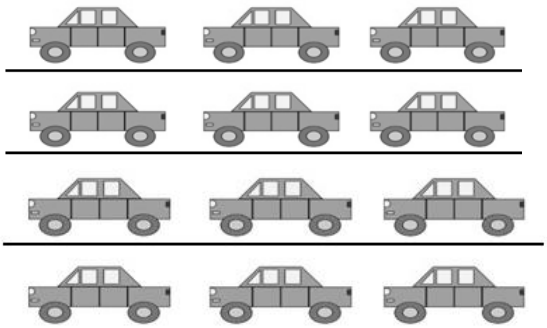
1. Count the size of each group to find the quotient. Then fill in the blanks to complete the division sentence.



20 apples are divided into _____ equal groups.

There are _____ apples in each group.

20 ÷ _____ = 10



12 ÷ _____ = _____

2. There are 15 pencils for the class. The teacher divides them into 3 equal groups. Draw the number of pencils in each group.

There are _____ pencils in each group.

15 ÷ _____ = _____

3. Draw a picture to show 9÷ 3. Then, fill in the blank to make a true division sentence.

Circle groups of 3

9 ÷ 3 = _____

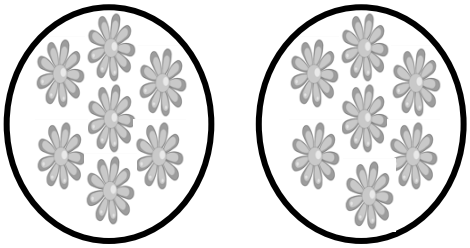
Name: _____ Thursday, September 24, 2020

BCCS-B College: _____

Problem Set:

Count the size of each group to find the quotient. Then fill in the blanks.

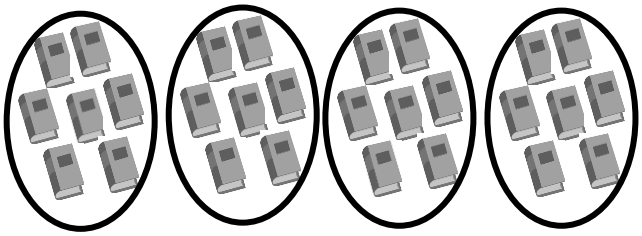
1.



14 flowers are divided into 2 equal groups.

There are _____ flowers in each group.

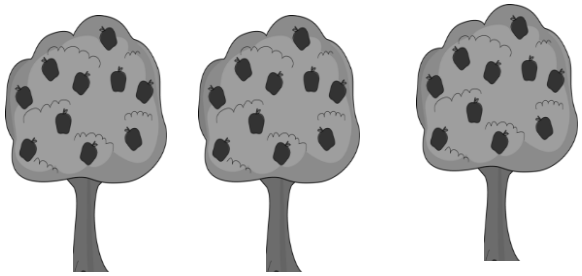
2.



28 books are divided into 4 equal groups.

There are _____ books in each group.

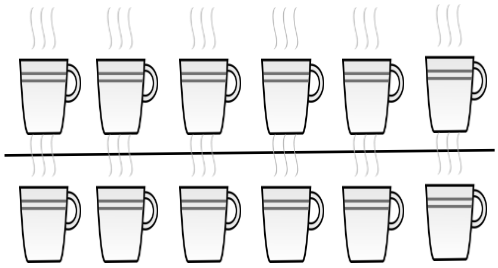
3.



30 apples are divided into _____ equal groups.

There are _____ apples in each group.

4.

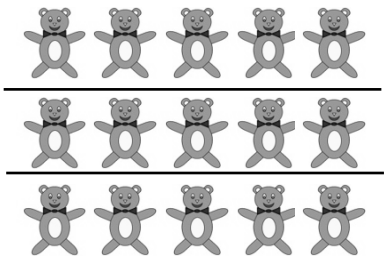


_____ cups are divided into ____2___ equal groups.

There are _____ cups in each group.

12 ÷ 2 = _____

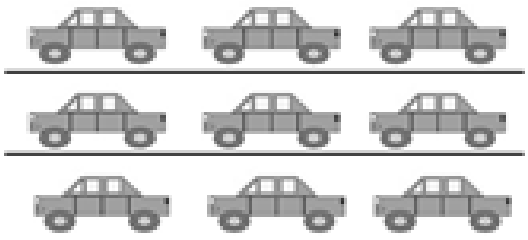
5.



There are _____ toys in each group.

15 ÷ 3 = _____

6.

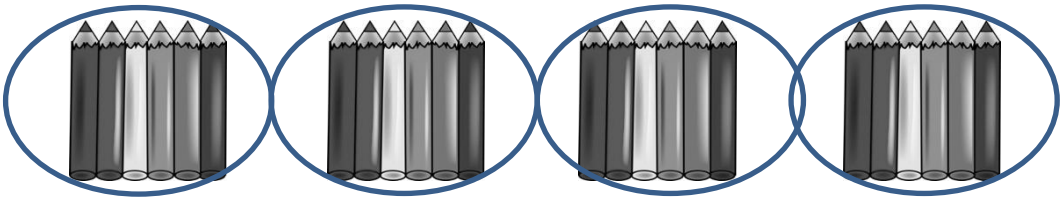


9 ÷ 3 = _____

Name: _____ Thursday, September 24, 2020

BCCS-B College: _____

7. Ms. Sherman has 24 colored pencils. She puts them in 4 equal groups. <u>How many colored pencils are in each group</u>?



Skip count by 5

There are _____ colored pencils in each group.

24 ÷ 4 = _____

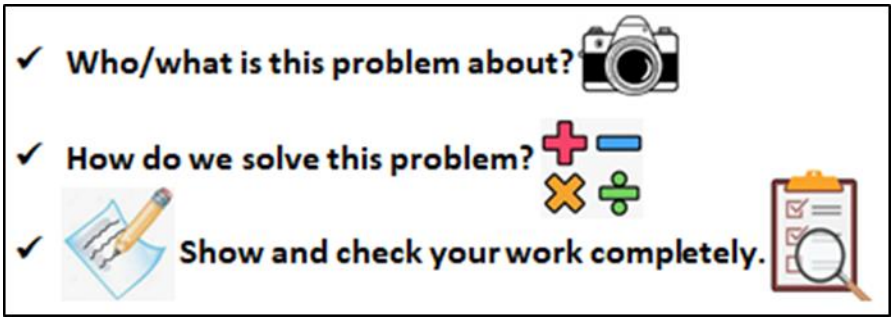
8. Zaymir picks 20 apples. He divides them <u>*equally*</u> between 5 baskets. Draw the apples in each basket.

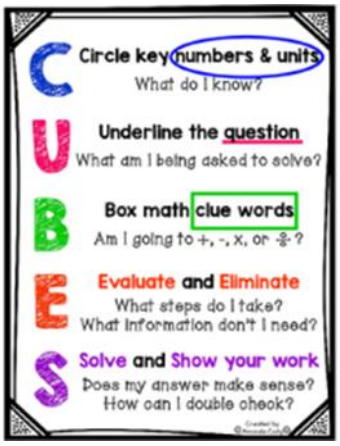
There are _____ apples in each basket.

20 ÷ _____ = _____

Name: _____ Thursday, September 24, 2020

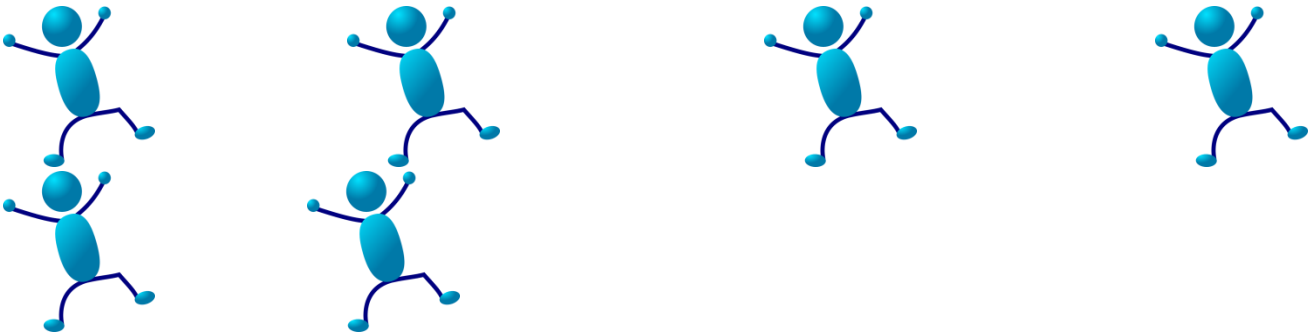
BCCS-B College: _____





Application:

Mrs. Wise has 24 stickers to share with her guided reading group. There are **6** scholars in her group. If she divided the stickers equally, *how many stickers did each scholar receive?* Show your work.



Name: _____ Thursday, September 24, 2020

BCCS-B College: _____

Exit Ticket:

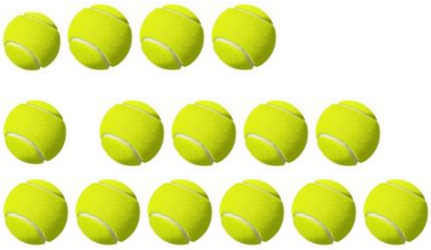
1. **There are 16 glue sticks for Yale. Ms. Maisenbacher divides them into 4 equal groups. Draw the number of glue sticks in each group.**

There are _____ glue sticks in each group.

16 ÷ _____ = _____

2. **Draw a picture to show 15 ÷ 3. Then, fill in the blank to make a true division sentence.**

15 ÷ 3 = _____

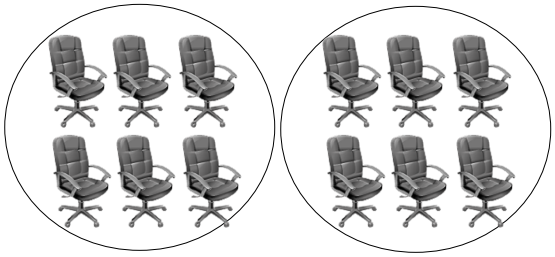


Circle groups of 3

Name: _____ Thursday, September 24, 2020

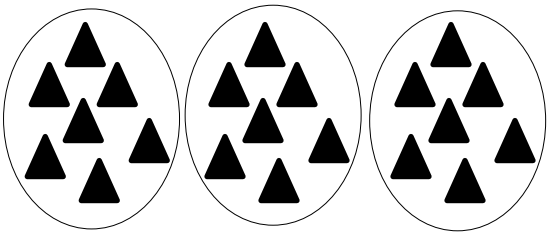
BCCS-B College: _____

Homework

1. 

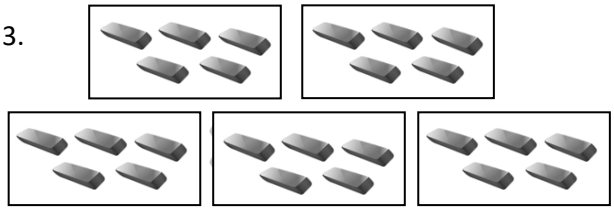
12 chairs are divided into 2 equal groups.

There are _____ chairs in each group

2. 

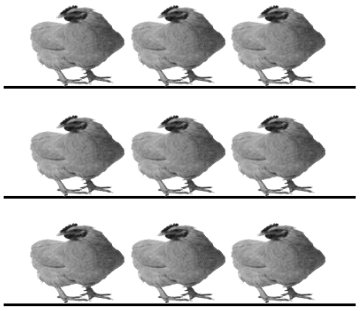
21 triangles are divided into 3 equal groups.

There are _____ triangles in each group.

3. 

25 erasers are divided into _____ equal groups.

There are _____ erasers in each group.

4. 

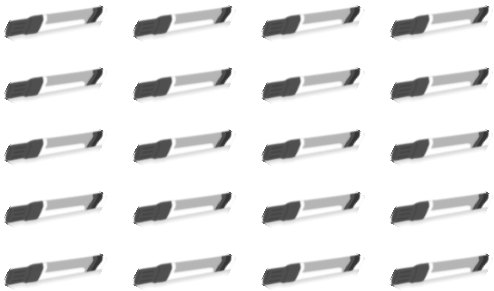
____9_ chickens are divided into _____ equal groups.

There are _____ chickens in each group.

9 ÷ 3 = _____

5. Mr. Miller has markers. The picture shows how he placed them on his desk. Write a division sentence to represent how he equally grouped his markers.

There are _____ markers in each row.



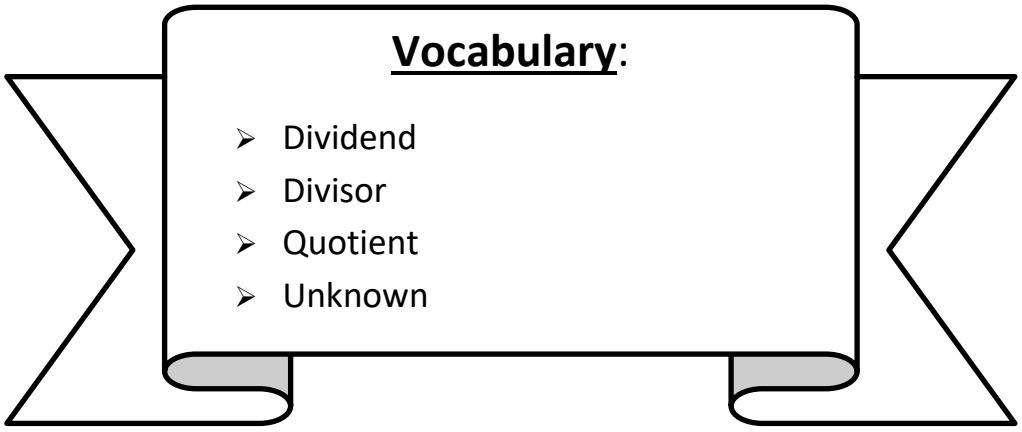
_____ ÷ _____ =_____

Name: _____ Friday, September 25, 2020

BCCS-B College: _____

LEQ: How can I understand the meaning of the unknown as the number of groups in division?

Objective: I can make equal groups using the given size of each group and total number of objects to understand the meaning of the unknown as the number of groups in division.



Name: _____ Friday, September 25, 2020

BCCS-B College: _____

Do Now:

Write a multiplication sentence to describe each model.

1) 

2 groups of 4

2 x 4 = 8

2 × 4 = 8

2) 

____ × ____ = ____

3) 

____ × ____ = ____

4) 

____ × ____ = ____

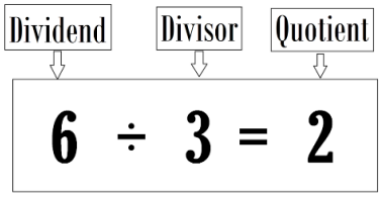
5) 

____ × ____ = ____

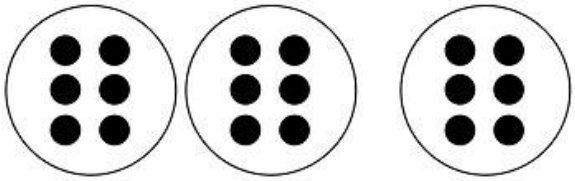
Name: _____ Friday, September 25, 2020

BCCS-B College: _____

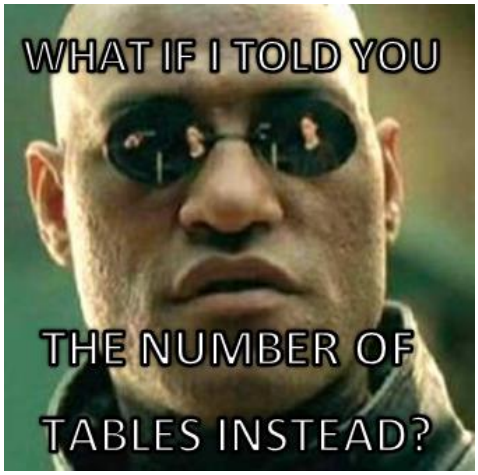
Input:



18 people are going to a party. 6 people fit at each table. How many tables are needed to sit everybody? We know that the dividend is ____ and the divisor is ___. The quotient or the unknown is _____ tables. We write this as 18 ÷ 6 = _____. We find the quotient by finding the number of tables needed.



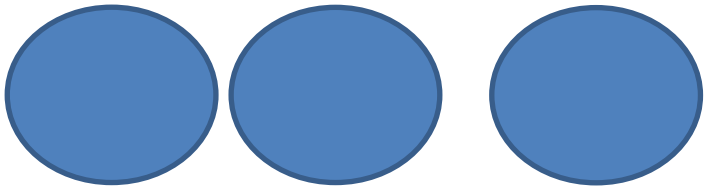
18 ÷ 6 = _____



21 people are going to a party. Each of the **3 tables** fit the same number of people. How many people sat at each table? We know that the dividend is ____ and the divisor is ____.The quotient or the unknown is _____ people. We write this as

21 ÷ 3 = _____. We find the quotient by finding the number of people at each table.

21 ÷ 3 = _____



Name: _____ Friday, September 25, 2020

BCCS-B College: _____

1.

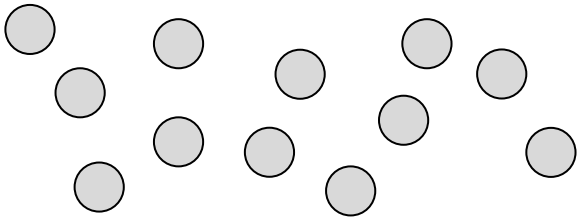
Divide 10 tomatoes into groups of 2.

There are _____ groups of 2 tomatoes.

10 ÷ 2 = _____

---

2. Jenny has 12 crackers. She puts 3 crackers in each bag. Circle the crackers to show Jenny's bags.

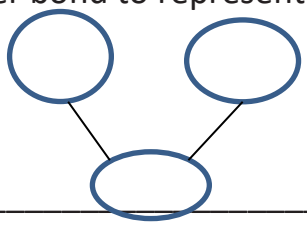


Circle groups of 3

a. Write a division sentence where the answer represents the number of Jenny's bags.

_____ ÷ _____ =_____

b. Draw a number bond to represent the problem.



---

3. Jaylan has 20 wheels to make toy cars. He uses 4 wheels for each car.

a. Use a count-by to find the number of cars Jaylan can build. **<u>Make a drawing to match your counting.</u>**

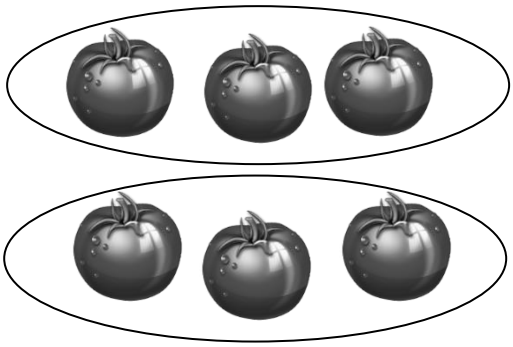
b. Write a division sentence to represent the problem. _____ ÷ _____ = _____

Name: _____ Friday, September 25, 2020

BCCS-B College: _____

Problem Set:

1.



Divide 6 tomatoes into groups of 3.

There are **2** groups of 3 tomatoes.

6 ÷ 3 = 2

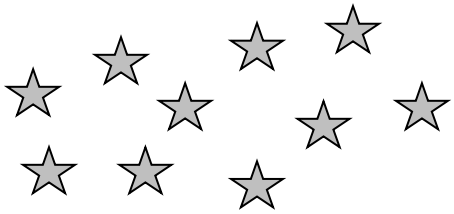
2.

Divide 8 lollipops into **groups of 2**.

There are _____ groups.

8 ÷ 2 = _____

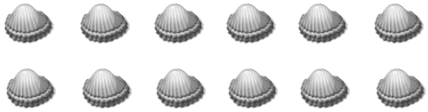
3.



Divide 10 stars into **groups of 5**.

10 ÷ 5 = _____

4.



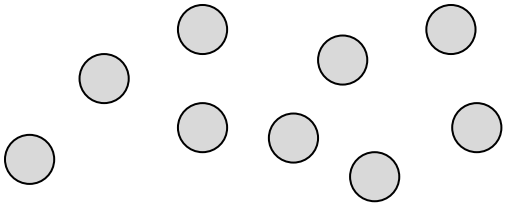
Divide the shells to show 12 ÷ 3 = _____, where the unknown represents the number of groups. **Circle groups of 3.**

How many groups are there? _____

Name: _____ Friday, September 25, 2020

BCCS-B College: _____

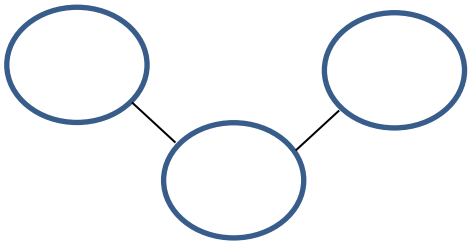
5. **Ms. Sherman has 9 crackers. She puts 3 crackers in each bag. Circle the crackers to show Ms. Sherman's bags.**



a. Write a division sentence where the answer represents the number of Ms. Sherman's bags.

_____ ÷ _____ =_____

b. Draw a number bond to represent the problem.



6. **Coach has 16 wheels to make toy cars. He uses 4 wheels for each car.**

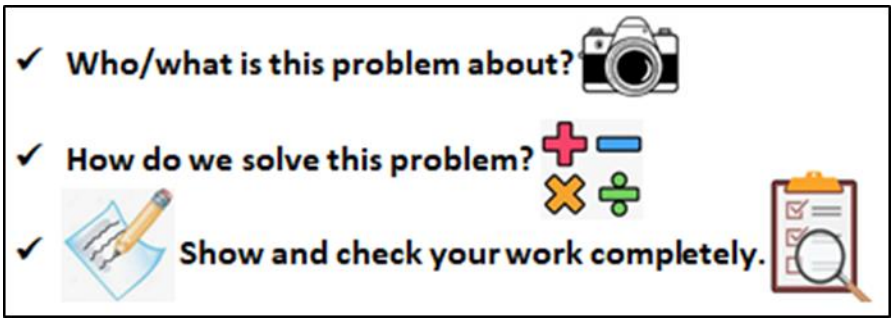
c. Use a count-by to find the number of cars Coach can build**. Make a drawing to match your counting.**

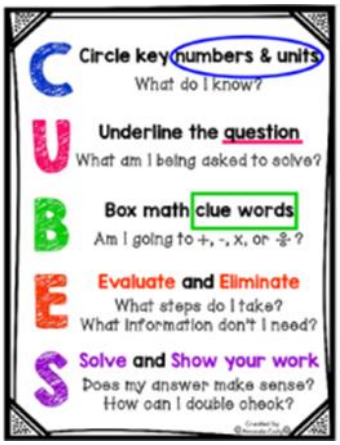
d. Write a division sentence to represent the problem.

_____ ÷ _____ =_____

Name: _____ Friday, September 25, 2020

BCCS-B College: _____





Application:

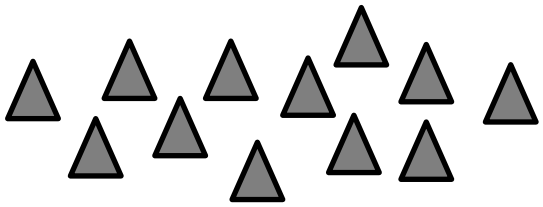
Mr. Miller puts 8 chocolate chips in each muffin he made. If he had 48 chocolate chips and he used all of it, how many muffins did he make?

Name: _____ Friday, September 25, 2020

BCCS-B College: _____

Exit Ticket:

1. **Divide 12 triangles into groups of 6.**

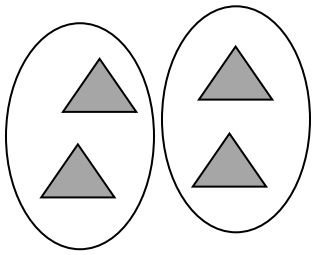
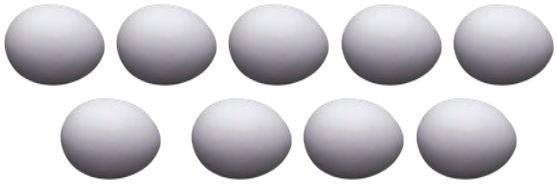


12 ÷ 6 = _____

Name: _____ Friday, September 25, 2020

BCCS-B College: _____

Homework

1.  Divide 4 triangles into groups of 2. There are **2** groups of 2 triangles. $4 \div 2 = 2$	2.  Divide 9 eggs into **groups of 3**. There are _____ groups. $9 \div 3 =$ _____

3. Jacob draws cats. He draws 4 legs on each cat for a total of 24 legs.

   a. Use a count-by to find the number of cats Jacob draws**. Make a drawing to match your counting.** *The first one has been done for you.*

   b. Write a division sentence to represent the problem.

$24 \div 4 =$ _____

Name _____

3rd Grade Modified Math Remote Learning Packet

Week 2

September 28th – October 1st

Dear Educator,

My signature is proof that I have reviewed my scholar's work and supported him to the best of my ability to complete all assignments.

_____ _____

(Parent Signature) (Date)

Parents please note that all academic are also available on our website at www.brighterchoice.org under the heading "Remote Learning." All academic packet assignments are mandatory and must be completed by all scholars.

Table Of Contents

Name: _____ Monday, September 28, 2020

BCCS-B College: _____

LEQ: How can I use the array model to interpret the unknown in division?

Objective: I can create an array using the number of groups (rows) and the size of each group (columns) to interpret the unknown in division.

Vocabulary:

- Quotient : **the answer in a division problem**
- Unknown factor
- Inverse operation: **3x4=12**
  4x3=12

Name: _____ Monday, September 28, 2020

BCCS-B College: _____

Do Now:

Fill in the blanks below using the phrase provided.

Example:

5 groups of 2 = 5 x 2 _____ 6 _____ groups of 3 = 6 x 3

1. 4 groups of 6 = 4 x _____	2. 5 groups of 3 = 5 x _____
3. 9 groups of 2= 9 x _____	4. _____ groups of 7 = 3 x 7
5. _____ groups of 5 = 5 x 5	6. 2 groups of 10 =____ x 10
7. 3 groups of 3 = 3 x _____	8. _____ groups of 10 = 5 x 10
9. 6 groups of 4 = _____ x 4	10. _____ groups of 8 = 4x 8

Name: _____ Monday, September 28, 2020

BCCS-B College: _____

Input:

Division and multiplication are **inverse** operations because you can use the answer in one of them to prove the answer in another. For example, we know that 2x **5**= 10. We can express this as 10÷2= **5**. 5 is both the **factor** and a **quoitent.** The product of the factors will always equal the dividend.

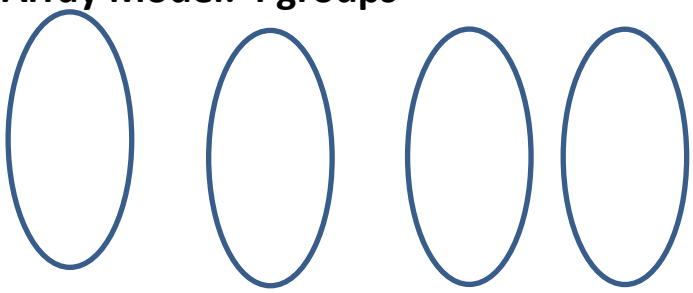
Mrs. Clute gives the equation 4 × __6__ = 24. Cameron finds the answer by writing and solving 24 ÷ 4 = __6__. Explain why Cameron's method works.

Cameron's method worked because it is

_____

_____

_____

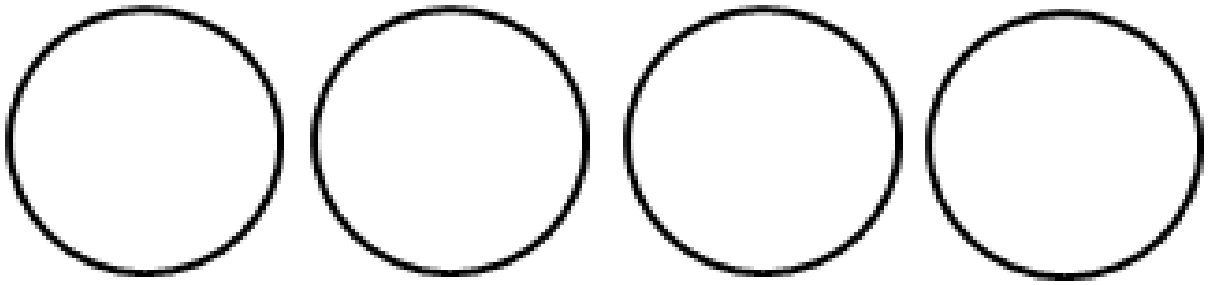
Array Model: 4 groups	**Array Model: 6 groups**
	
4 x _____ = 24	6 x _____ = 24
24 ÷ 4 = _____	24 ÷ 6 = _____
the number in the blanks represents _____ _____	the number in the blanks represents _____ _____

Name: _____ Monday, September 28, 2020

BCCS-B College: _____

Problem Set:

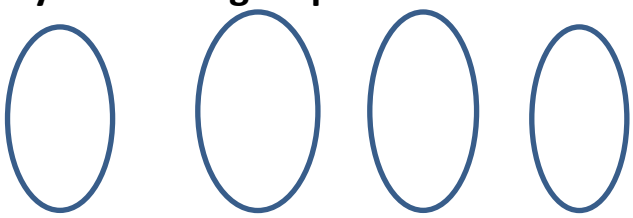
1. Mrs. Lewis gives the equation 4 × ____ = 12. Charlie finds the answer by writing and solving 12 ÷ 4 = ____. Explain why Charlie's method works.



Charlie's method works because

_____

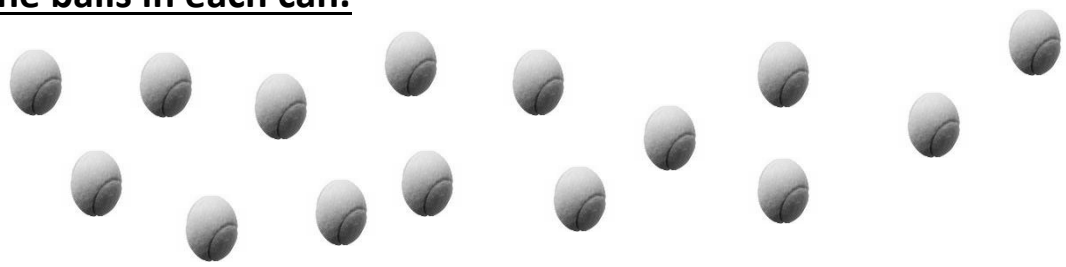
_____

Array Model: 4 groups	**Array Model: 3 groups**
	
How many need to be in each group?	3 x _____ = 12 (total)
4 x _____ = 12 (total)	12 ÷ 3 = _____
12 ÷ 4 = _____	the number in the blanks represents
the number in the blanks represents	_____
_____	_____
_____	

Name: _____ Monday, September 28, 2020

BCCS-B College: _____

2. Coach puts 15 tennis balls into cans. Each can holds 3 balls. Circle groups of 3 to show the balls in each can.



Coach needs _____ cans.

_____ × 3 = 15

15 ÷ 3 = _____

3. Draw an array to model Problem 2.

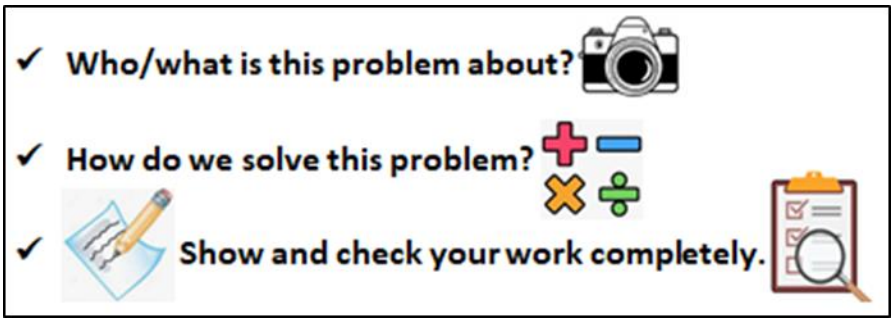
4. Mrs. Blomgren arranges 21 index cards into rows of 7 for her presentation. Draw an array to help you fill in the blanks below.

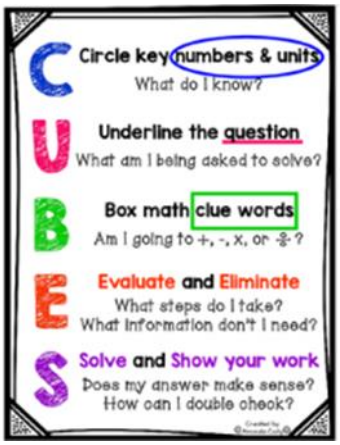
21 ÷ 7 = _____

_____ × 7 = 21

Name: _____ Monday, September 28, 2020

BCCS-B College: _____





Application:

Twenty children play a game. There are 5 children on each team. How many teams play the game? Write a division and multiplication sentence to represent the problem.

1 Team

_____ x_____ = 20	20 ÷ ____= _____

Name: _____ Monday, September 28, 2020

BCCS-B College: _____

Exit Ticket:

1. Carter arranges 12 index cards into rows of 6 for his presentation. Draw an array to help you fill in the blanks below.

_____

_____

12 ÷ 6 = _____

_____ × 6 = 12

What do the unknown factor and quotient represent?

The factor and quotient represent_____

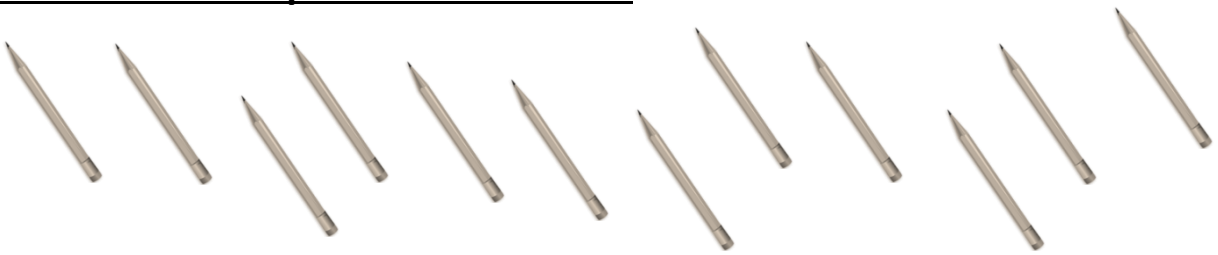
_____

Name: _____ Monday, September 28, 2020

BCCS-B College: _____

Homework

1. **Mr. Moore puts 12 pencils into boxes. Each box holds 4 pencils. Circle groups of 4 to show the pencils in each box.**



Mr. Moore needs _____ boxes.

_____ × 4 = 12

12 ÷ 4 = _____

2. Draw an array to model Problem 1

Name: _____ Tuesday, September 29, 2020

BCCS-B College: _____

LEQ: How can I demonstrate the commutative property of multiplication?

Objective: I rotate an array to switch the rows and columns and use C x R = P in a multiplication sentence to demonstrate the commutative property of multiplication.

Vocabulary:

- Commutative Property: **3+5=5+3**
- Factors: **The numbers you are multiplying**
- Product : **an answer in a multiplication problem**

Name: _____ Tuesday, September 29, 2020

BCCS-B College: _____

Do Now:

Write a multiplication sentence for each expression. Skip-count to find the product.

Example → 5 twos: 5 x 2 = 10

a. 6 twos: _____ x _____ = _____

b. 2 sixes: _____ x _____ = _____

c. 7 twos: _____ x _____ = _____

d. 2 sevens: _____ x _____ = _____

e. 9 twos: _____ x _____ = _____

f. 2 nines: _____ x _____ = _____

Name: _____ Tuesday, September 29, 2020

BCCS-B College: _____

Input:

Factors can change order without changing the product. We call that the **communitive** property**.** For example, if we know that 2 x 4=8, then we also know that **4x2=8.** We are only changing the order of the factors, not its value. In an array, we can **rotate** the array 90 degrees to switch our rows and columns. Our equation to find the product is now _____.

4 x 2 = 8	**2 x 4 = 8**
	

1. a. Draw an array that shows <u>5 rows of 2</u>.

b. Write a multiplication sentence where the first factor represents the number of rows.

_____ × _____ = _____

2. a. Draw an array that shows <u>2 rows of 5</u>.

b. Write a multiplication sentence where the first factor represents the number of rows.

_____ × _____ = _____

Name: _____ Tuesday, September 29, 2020

BCCS-B College: _____

Input:

Mrs. Page writes 2 × 9 = 9 × 2 on the board. Do you agree or disagree? Draw arrays to help explain your thinking.

I agree/ disagree because

_____

_____

_____

_____

2x9 = ____	**9x2 = _____**

Name: _____ Tuesday, September 29, 2020

BCCS-B College: _____

Problem Set:

1. a. Draw an array that shows 6 rows of 3.

b. Write a multiplication sentence where the first factor represents the number of rows.

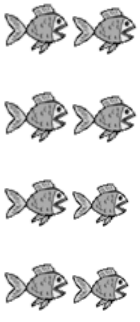
_____ × _____ = _____

2. a. Draw an array that shows 3 rows of 6.

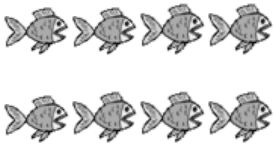
b. Write a multiplication sentence where the first factor represents the number of rows.

_____ × _____ = _____

3. Use your knowledge of RxC=P and the commutative property to write and solve multiplication sentences for each array.



4x2=8



_____

Name: _____ Tuesday, September 29, 2020

BCCS-B College: _____

4. Ms. Neville writes 2 × 7 = 7 × 2 on the board. Do you agree or disagree? Draw arrays to help explain your thinking.

I agree/ disagree with Ms. Neville because

_____

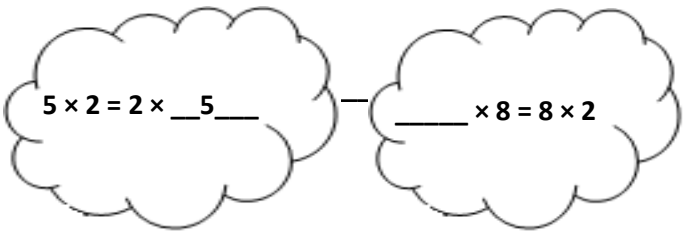
_____

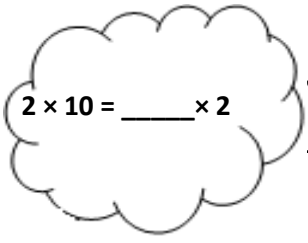
_____

_____

2x7 = 14	**7x2 = 14**

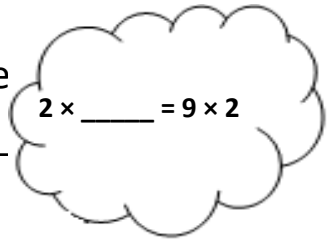
5. Find the missing factor to make each equation true.

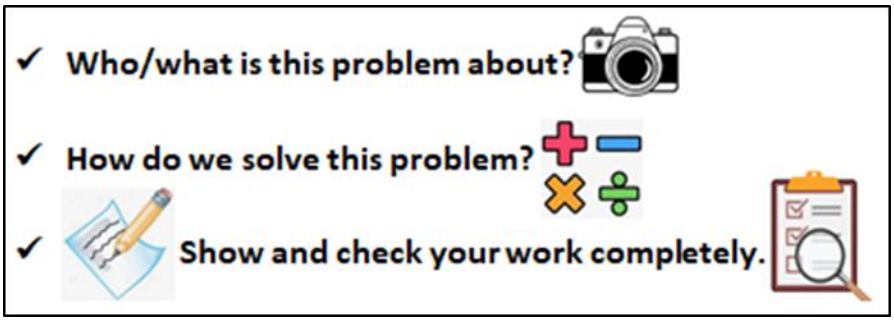


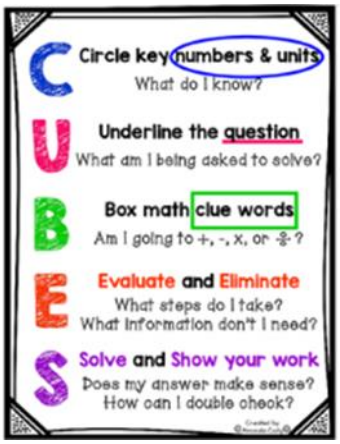


Se

___







Application:

Mr. Pierce arranges 18 basketballs two different ways. The first time he has 6 rows of basketballs and the second time he has 3 rows of basketballs. **Draw two different arrays to show how Mr. Pierce arranges the basketballs and write a multiplication sentence for each array.**

6 rows	3 rows
_____ _____ _____ _____ _____	_____ _____ _____
6 x _____ =18	3 x _____ = 18

Name: _____ Tuesday, September 29, 2020

BCCS-B College: _____

Exit Ticket:

Mrs. Mercado says that 2x10 = 10x2. Do you agree with her? Draw arrays and use skip-counting to explain your thinking.

I agree/disagree with Mrs. Mercado

because_____

_____.

2x10

10x2

Name: _____ Tuesday, September 29, 2020

BCCS-B College: _____

Homework

1. a. Draw an array that shows 4 rows of 5.

b. Write a multiplication sentence where the first factor represents the number of rows.

_____ × _____ = _____

2. a. Draw an array that shows 5 rows of 4.

b. Write a multiplication sentence where the first factor represents the number of rows.

_____ × _____ = _____

2. Find the missing factor to make each equation true.

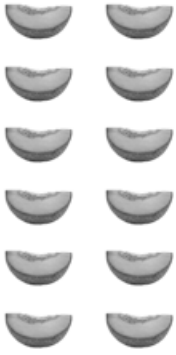
2 × 6 = 6 × 2

_____ × 2 = 2 × 7

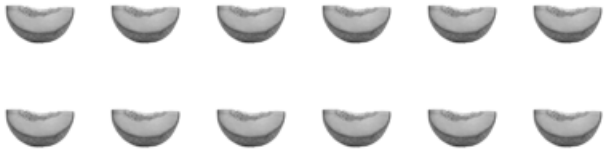
9 × 2 = _____ × 9

2 × ____ = 10 × 2

3. Use your knowledge of RxC=P to write and solve multiplication sentences for each array.



_____



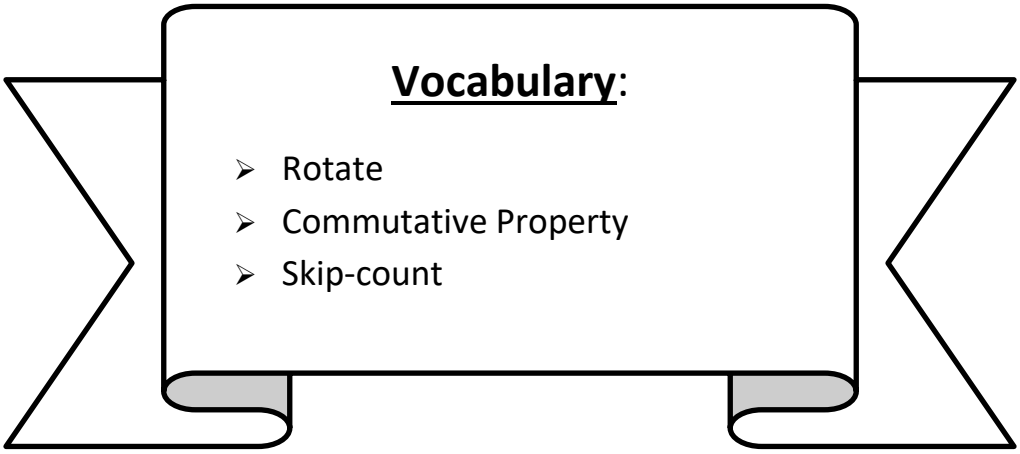
_____

Name: _____ Wednesday, September 30, 2020

BCCS-B College: _____

LEQ: How can I practice related multiplication facts involving the commutative property?

Objective: I can label the rows to skip-count and practice related multiplication facts involving the commutative property.

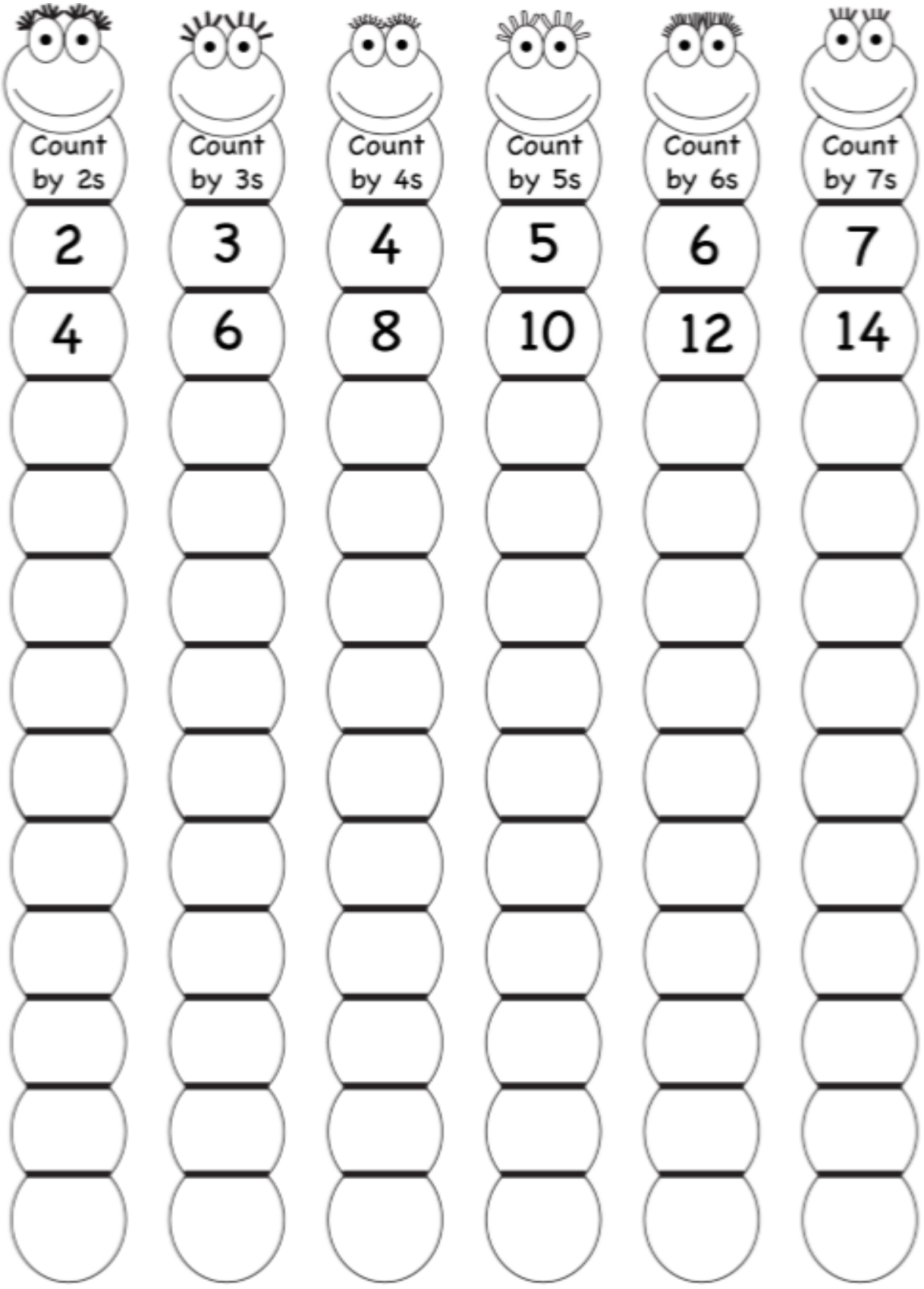


Name: _____ Wednesday, September 30, 2020

BCCS-B College: _____

Do Now:

Skip-count until you reach the bottom of each caterpillar!



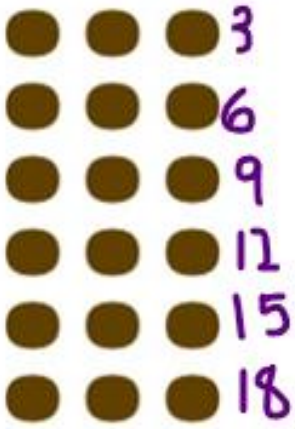
Name: _____ Wednesday, September 30, 2020

BCCS-B College: _____

Input:

The commutative property states that even when the **factors** are switched and arrays are **rotated,** the product remains the same. We can prove this by counting by the number of groups or rows. This method is called **skip counting.** We will label each row to show the skip-counting sequence until we reach the **product.**

For example:



6x3=18

3x6=18

Draw and label each array below with a skip-count sequence to find the product.

2x9= 18	**9x2= 18**
2,4,5,6,8,10,12,14,16,18	

Name: _____ Wednesday, September 30, 2020

BCCS-B College: _____

Ms. Ogden organizes pictures on a table. She arranges them in <u>4 rows and 6 columns.</u>

a. ___Draw an array to show Ms. Ogden's pictures.

b. ___Use your array to write a multiplication sentence to find Ms. Ogden's total number of pictures.

_____ X _____ = _____

c. ___Label your array to show how you skip-count to solve your multiplication sentence.

d. ___Use what you know about the commutative property to write a different multiplication sentence for your array.

_____ X _____ = _____

Name: _____ Wednesday, September 30, 2020

BCCS-B College: _____

Problem Set:

1. Draw and label each array with a skip-count sequence to find the product.

4x5= 20	**5x4= 20**
5,10,15,20	
3x7= 21	**7x3= 21**
1x10=10	**10x1=10**

Name: _____ Wednesday, September 30, 2020

BCCS-B College: _____

2. Mr. Young organizes erasers on a table. He arranges them in <u>3 rows and 9 columns.</u>

a. ___Draw an array to show Mr. Young's erasers.

b. ___Use your array to write a multiplication sentence to find Mr. Young's total number of erasers.

_____ X _____ = _____

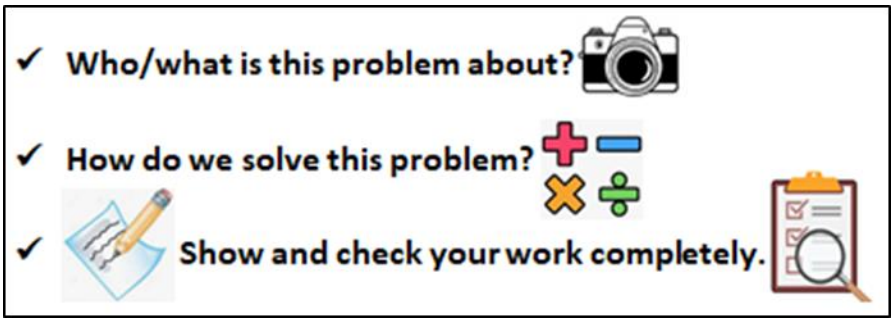
c. ___Label your array to show how you skip-count to solve your multiplication sentence.

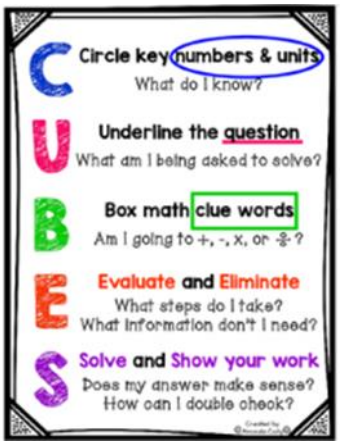
d. ___Use what you know about the **commutative property** to write a different multiplication sentence for your array.

_____ X _____ = _____

Name: _____ Wednesday, September 30, 2020

BCCS-B College: _____





Application:

Scholars sit in **2 rows of 8** on the carpet for math time. Aaron says, "We make 2 equal groups." Daniel says, "We make 8 equal groups." Who is correct? Explain how you know using models, numbers, and words.

Aaron and Daniel are both correct because

_____

_____

Name: _____ Wednesday, September 30, 2020

BCCS-B College: _____

Exit Ticket:

1. Draw and label each array with a skip-count sequence to find the product.

4x6= 24	**6x4= 24**

Name: _____ Wednesday, September 30, 2020

BCCS-B College: _____

Homework

1. Draw and label each array with a skip-count sequence to find the product.

4x9=36	**9x4= 36**
4,8,12,16,20,24,28,32,36	
3x10= _____	**10x3= _____**

Name: _____ Thursday, October 1st, 2020

BCCS-B College: _____

LEQ: How can I find related multiplication facts using addition?

Objective: I can add equal groups to an array model to find related multiplication facts.

Vocabulary:

- Array
- Sum: **The answer in an addition problem.**
- Product: **the answer in a multiplication problem.**

Name: _____ Thursday, October 1st, 2020

BCCS-B College: _____

Do Now:

Multiply by 2 to find the missing products below.

2 x 1 = 2	2 x 2 = 4	2 x 3 = 6	2 x 4 = 8
2 x 5 = 10	2 x 1 = _____	2 x 2 = _____	2 x 1 = _____
2 x 3 = _____	2 x 1 = _____	2 x 4 = _____	2 x 1 = _____
2 x 5 = _____	2 x 1 = _____	2 x 2 = _____	2 x 3 = _____
2 x 2 = _____	2 x 4 = _____	2 x 2 = _____	2 x 5 = _____
2 x 2 = _____	2 x 1 = _____	2 x 2 = _____	2 x 3 = _____
2 x 1 = _____	2 x 3 = _____	2 x 2 = _____	2 x 3 = _____
2 x 4 = _____	2 x 3 = _____	2 x 5 = _____	2 x 3 = _____
2 x 4 = _____	2 x 1 = _____	2 x 4 = _____	2 x 2 = _____
2 x 4 = _____	2 x 3 = _____	2 x 4 = _____	2 x 5 = _____
2 x 4 = _____	2 x 5 = _____	2 x 1 = _____	2 x 5 = _____
2 x 2 = _____	2 x 5 = _____	2 x 3 = _____	2 x 5 = _____
2 x 4 = _____	2 x 2 = _____	2 x 4 = _____	2 x 3 = _____
2 x 5 = _____	2 x 3 = _____	2 x 2 = _____	2 x 4 = _____
2 x 3 = _____	2 x 5 = _____	2 x 2 = _____	2 x 4 = _____

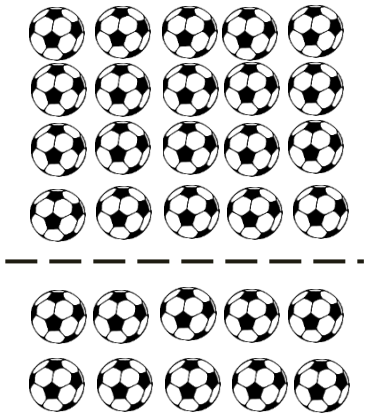
Name: _____ Thursday, October 1st, 2020

BCCS-B College: _____

Input:

We can use _____ multiplication facts to help us with more complicated ones. Some familiar facts include **twos, fives, and tens.** In an array, we can add additional _____ groups or _____ to our familiar facts. We find the _____ of the two smaller products to find a larger product.

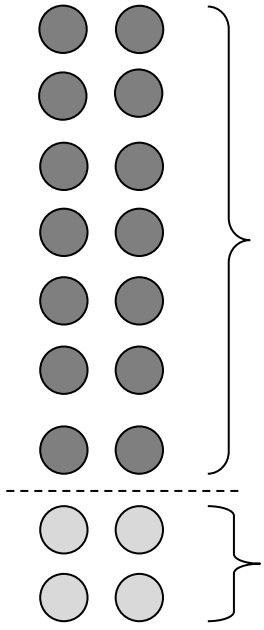
1. The team organizes soccer balls into 4 rows of 5. The coach adds 2 rows of 5 soccer balls. Complete the equations to describe the total array.



4 fives + 2 fives = ___6___ fives

6 × 5 = 30

2.



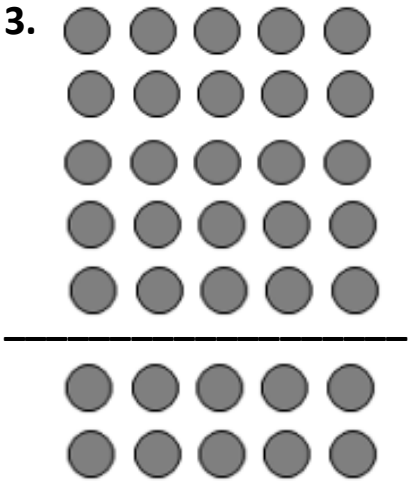
7 × 2 = ___

2 × 2 = ___

14 + 4 = _____

_____ × 2 = ____

3.



_____ x____ = _____

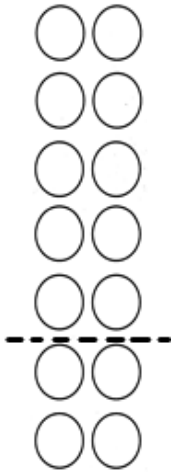
_____ x _____ =_____

Name: _____ Thursday, October 1st, 2020

BCCS-B College: _____

Problem Set:

1.

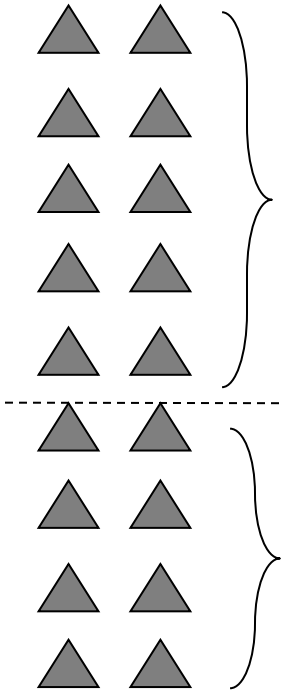


5 twos + 2 twos = _____ twos

(5x2) + (2x2) =

7× 2 = _____

2.



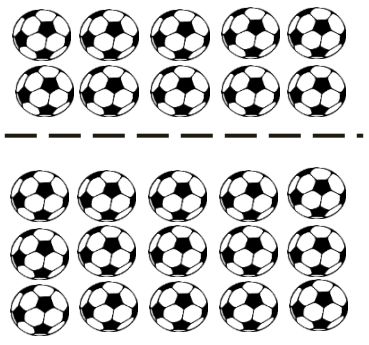
5 × 2 = ___

Add the two products to get the final product.

9 × 2 = _____

4 × 2 = ___

3. The team organizes soccer balls into 2 rows of 5. The coach adds 3 rows of 5 soccer balls. Complete the equations to describe the total array.



a. (5 + 5) + (5 + 5 + 5) = _____

b. 2 fives + 3 fives = _____ fives

c. _____ × 5 = _____

Name: _____ Thursday, October 1st, 2020

BCCS-B College: _____

4. Franklin collects stickers. He organizes his stickers in <u>5 rows of four</u>(4).

a. Draw an array to represent Franklin's stickers. **<u>Use an x to show each sticker.</u>**

_____

_____

_____

_____

b. Solve the equation to find Franklin's total number of stickers. $5 \times 4 = 20$

c. Franklin **<u>adds 2 more rows</u>**. **<u>Use circles to show his new stickers on the array in above.</u>**

d. Complete the equation to show how you add the totals of 2 multiplication facts to find Franklin's total number of stickers.

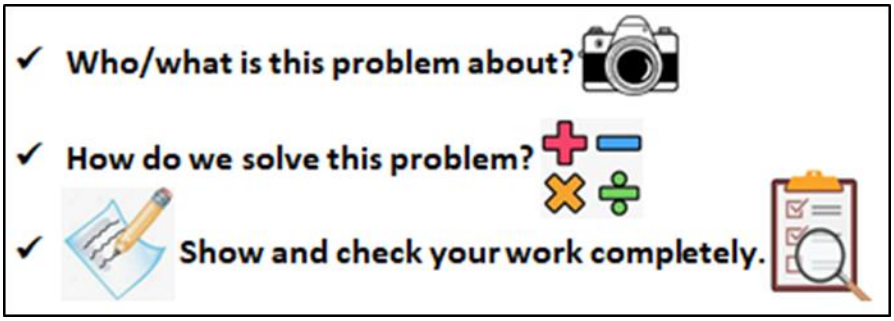
_____ + _____ = 28

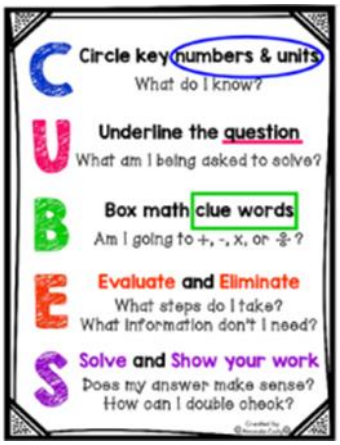
e. Complete the unknown to show Franklin's total number of stickers.

_____ × 4 = 28

Name: _____ Thursday, October 1st, 2020

BCCS-B College: _____





Application:

Mr. Mercado puts his work tools in an array of **6x5**. His friend Mr. John adds his tools in an array of **3 rows of 5**. How many tools do they have together? Write a complete multiplication sentence.

First you need to solve the multiplication and then you need to add the products.

6x5=_____

3x5=_____ _____ + _____ =_____

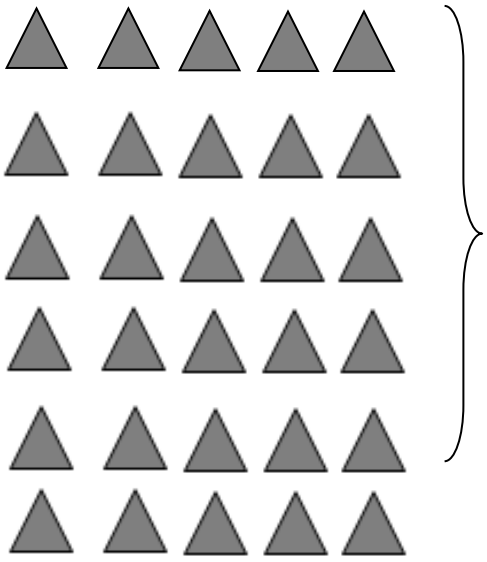
Hint: skip count by 5

Name: _____ Thursday, October 1st, 2020

BCCS-B College: _____

Exit Ticket:

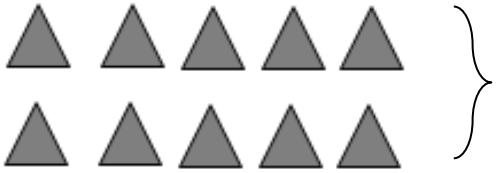
Add equal group of five to fill in the blanks below.



6 × 5 = ___

Count all you triangles or skip count by 5 to get the product for 6x5 and 2x5

Then, add your products to solve for 8x5



2 × 5 = ___

8 x 5 = _____

Name: _____ Thursday, October 1st, 2020

BCCS-B College: _____

Homework

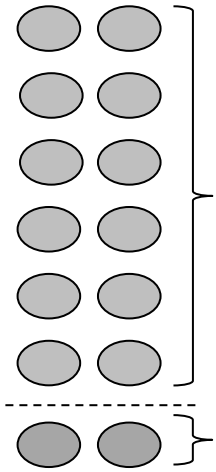
1. Dan organizes his stickers into 3 rows of four. Irene adds 2 more rows of stickers. Complete the equations to describe the total number of stickers in the array.

a. (4 + 4 + 4) + (4 + 4) = _____

b. 3 fours + _____ fours = _____ fours

c. _____ × 4 = _____

2. 7x2= _____



6 × 2 = ___

1 × 2 = ___

12 + 2 = _____14_____

_____ × 2 = 14