Name: _____

# 3<sup>rd</sup> Grade Math Summer Learning Packet
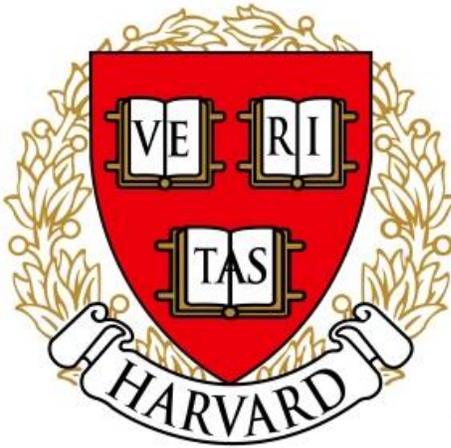
Parents/Guardians please note that this Summer Learning Packet is also available on our website at www.brighterchoice.org under the heading "Remote Learning." All assignments within this packet are to help scholars retain what has been taught the 2020-2021 school year. This packet can be returned at the beginning of next school year for a prize if completed in its entirety.  We thank you greatly for your continued support.

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| | |
|---|---|
| 1)  4+4+4+4= _____ | 2) What is 6 tens? <br><br> ____ X ____ = _____ |
| 3)  Show the array model as a multiplication sentence and solve. <br><br> ⬭ ⬭ ⬭  ____ X ____ = _____ <br> ⬭ ⬭ ⬭ <br> ⬭ ⬭ ⬭ | 4) 5+5+5+5+5= _____ |
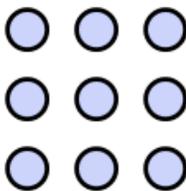
5) Mrs. Blomgren has 4 plates. She puts 9 cookies on each plate. How many cookies does she have in all?



Mrs. Blomgren has _____ cookies in all.

1)
$$92 + 8$$

2)
$$36 + 14$$

3)
$$89 - 5$$

4)
$$45 + 18$$

5) There are 54 chicken nuggets left at the McDonald's on Central Avenue. Mr. Moore bought 19 chicken nuggets and Mrs. Moore bought the rest. How many chicken nuggets did Mrs. Moore buy?

Mrs. Obama bought _____ chicken nuggets.

1) Draw an array model for 6x4 and solve for the product.

_____ X _____ = _____

2) Write 3 different multiplication sentences to show a product of 12.

*Ex: 2 x 6 =12*

_____ X _____ = 12

_____ X _____ = 12

_____ X _____ = 12

3) Draw an array model with two rows and a product of 10.

4) 76+4= _____

5) 189-15=_____

| 1)  What is 6 x 9? | 2) What is half of 50? |
|---|---|
| 3)  There are  _____ rectangles in each row  There are  _____ rectangles in each column | 4) What is the product of 9 times 5? |
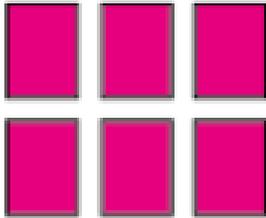
5) Fill in the blank to complete the division sentence for the diagram below. Find the quotient.



_____ ÷ 4 = _____
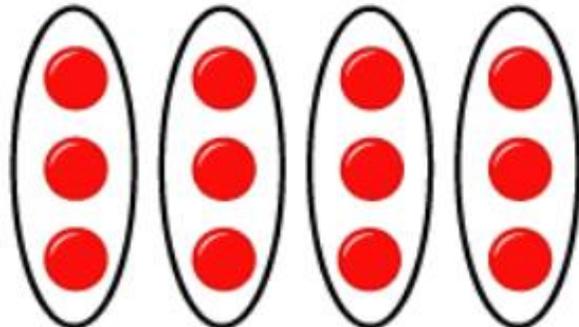
4

| 1) What comes next in the pattern?  2  4  6  8  10  12 ___ ___ ___ | 2) What is 12 plus three plus 7?  _____ + _____ + _____ = _____ |
|---|---|
| 3)  19+72= | 4) What is the difference of 100 and 12? |

5)

**6 columns**

**4 rows**
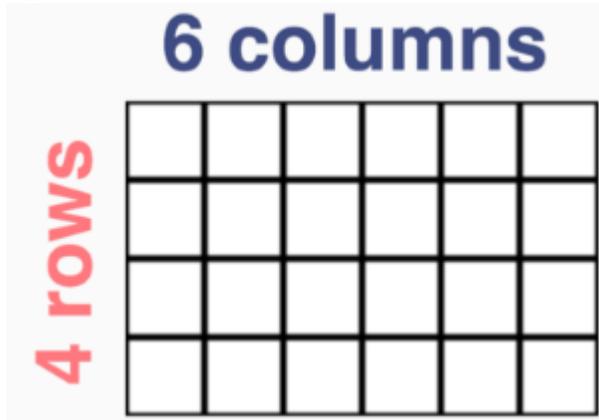
Number of rows: _____

Number of columns: _____

What multiplication sentence does the array model above represent?

_____ x _____ = _____

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| 1) <br><br>160+310= _____ | 2) <br><br>2+20+60= _____ | 3) <br><br>What is sixteen plus 24? |
| --- | --- | --- |
| 4) <br><br>510+445= _____ | 5) <br><br>188+80= _____ | 6) <br><br>10+10+10= _____ |

7)



Represent the array model above using repeated addition.

_____ + _____ + _____ = _____

1) Dayshawn placed 14 cups in rows on a table. There are 7 cups in each row. Draw a model of the cups below to show the number of columns.

2) Make a list of items that might weigh about 1 gram.

➢ _____

➢ _____

➢ _____

➢ _____

➢ _____

GRAM
(small)
imagine holding a paperclip

3) There were 45 students in a school band. The band teacher arranged the group into 5 equal groups. How many students were in each group? Show your work.

There were _____ students in each group.

4) **Fill in the missing blanks**

a. ____ x 6 = 36

b. 8 x ____ = 24

c. 4 x 4 = ____

d. 3 x ____ = 27

e. 10 x 8= _____

f. ____ x 5 = 45

## Fill in the blanks to make the statements true.

1)



4 groups of five = _____

4 fives = _____

$4 \times 5 =$ _____

2)
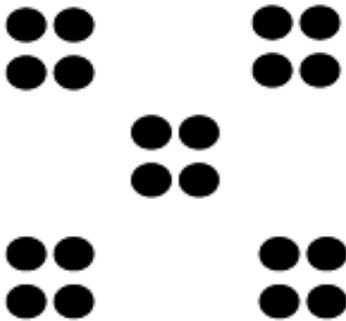


5 groups of four = _____

5 fours = _____

$5 \times 4 =$ _____

3)



6+6+6= _____

_____ groups of six = _____

3x_____= _____
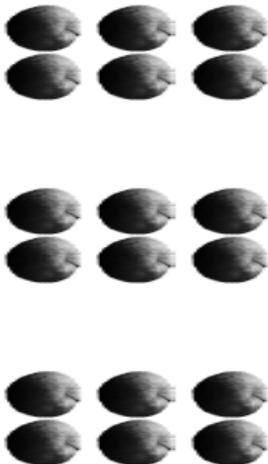
1) The picture below shows 2 groups of hot dogs. Does the picture show
3 × 2 or 2 x 3? Explain using complete sentences.



_____

_____

_____.

2) Circle the pencils below to show 3 groups of 6. Write a multiplication sentence to
represent the picture.
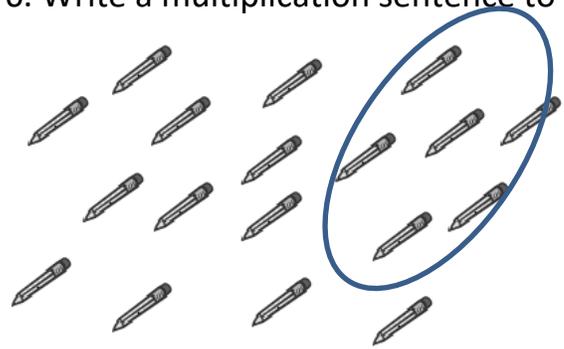


Multiplication sentence: _____

3) Messiah arranges his 18 markers as an array. Draw an array that he might make.
Then, write a multiplication equation to describe your array.

| Array | Multiplication sentence |
|---|---|
|  |  |

**Fill in the blanks; please remember that rows go from left to right and columns go up and down.**

1)
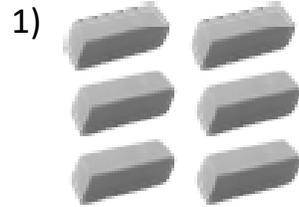
a. How many rows of erasers are there? _____

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

2)
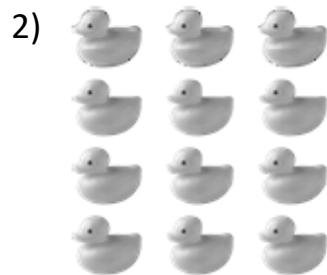
a. What is the number of rows? _____

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

3)
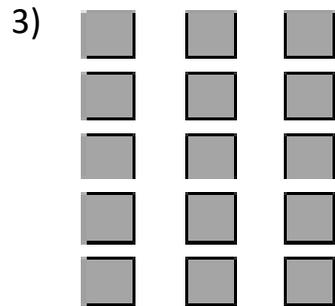
a. There are 3 squares in each row. How many squares are in 5 rows? _____

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

4)

Redraw the triangles as an array that shows 3 rows of four.

1) There are 5 pineapples in each group. How many pineapples are there in 8 groups?



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

b. 8 × 5 = _____

c. There are _____ pineapples altogether.


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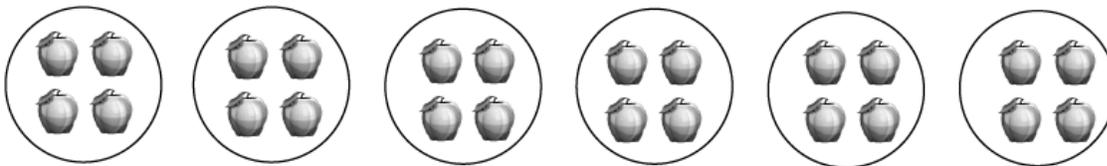


a. Number of groups: _____, Size of each group: _____

b. 6 × _____ = _____

c. There are _____ apples altogether.


3) Draw an array using factors 2 and 6. Then write an answer sentence to show the product.

1)
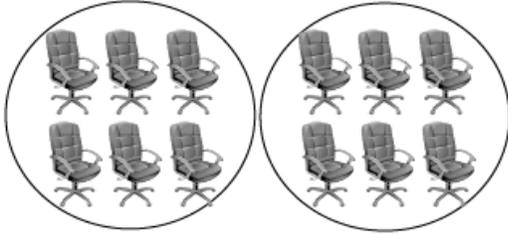


12 chairs are divided into 2 equal groups.

There are _____ chairs in each group.

2)
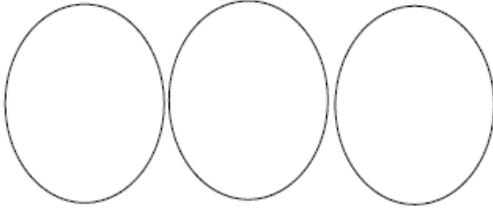


21 triangles are divided into 3 equal groups. Draw the number of triangles in each group.

There are _____ triangles in each group

3)
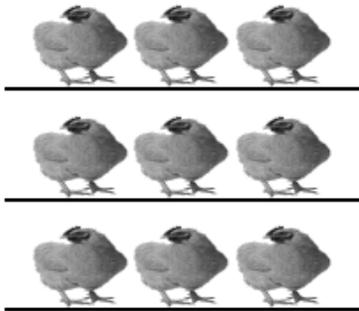


_____ chickens are divided into _____ equal groups.

There are _____ chickens in each group.

9 ÷ 3 = _____

4) Mr. Moore has 20 pencils. He divides them equally between 4 tables. Draw the pencils on each table.

There are _____ pencils on each table.

20 ÷ _____ = _____

### Add the numbers below

1) 40+3=_____                 2) 55+4= _____                 3) 35+2= _____

4)15+4= _____                 5) 25+1= _____                 6) 20+4= _____

7) 50+4=_____                 8)20+7=_____                   9) 15+2= _____

### Subtract the numbers below

10) 25-4= _____               11) 30-1=_____                 12) 55-2= _____

**What time is shown below? Please remember that the short hand represents the hour and the long hand shows the minutes.**

13)
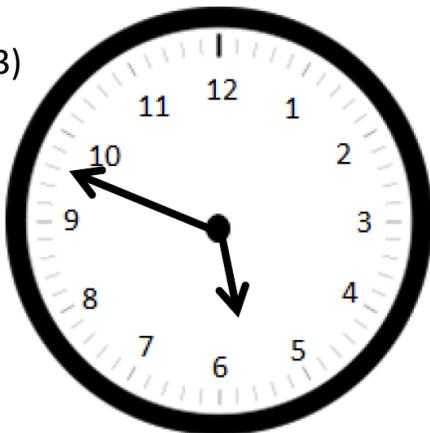


14)



___ : _____                                 ___ : _____

1) Mrs. Blomgren uses 4 apples to make an apple pie. She makes 5 pies. How many apples did she use? Show your work.



2) How many rows and columns are there in the array below?
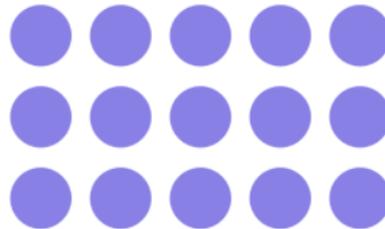


There are _____ rows of _____

Multiplication sentence _____ x _____ = _____

3)



Multiplication sentence _____ x _____ = _____

1)
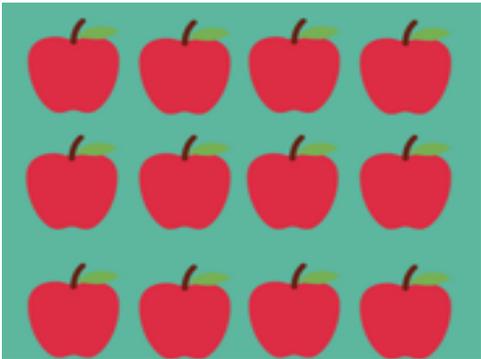


a. How many rows of apple are there? _____

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

2)



a. How many rows of donuts are there? _____

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

3)
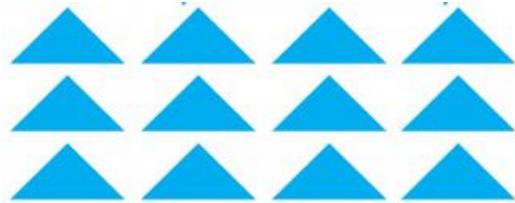


a. How many rows of triangles are there? _____

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

4)
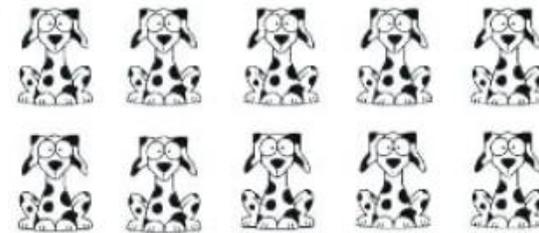


a. How many dogs are in each row? _____

b. Write a multiplication equation to describe the array. _____

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**Solve problems 1-3 using the pictures provided for each problem.**

1)
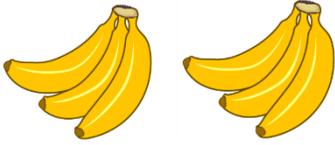


a. number of groups _____          size of each group _____

b. 2x3= _____

c. There are _____bananas altogether

_____

2)



a. number of groups _____          size of each group _____

b. 3x4= _____

c. There are _____flowers altogether

_____

3) There are four strawberries in each row. How many strawberries are there in _____rows?
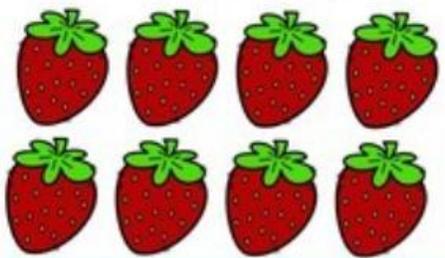


a. Number of rows _____ size of each row: _____

b. _____ x 4= _____

c. There are _____ strawberries in all

16

1)
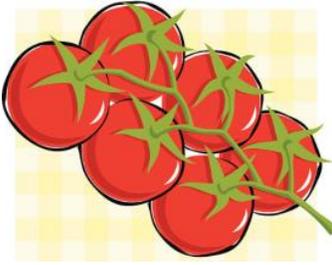


Divide 6 tomatoes into groups of 3.

There are _____ groups of 3 tomatoes.

6 ÷ 3 = 2

_____

2) Divide 10 stars into groups of 5.



10 ÷ 5 = _____

_____

3)



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

How many groups are there? _____

_____

4) Divide 12 triangles into groups of 6.



12 ÷ 6 = _____

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| Original Equation | Commutative Property | Division Equations |
| --- | --- | --- |
| *1)* <br><br> *2x7=14* | *7x2=14* | *14÷2=7   OR    14÷7=2* |
| 2) <br><br> 4x5=20 | | |
| 3) <br><br> 3x4=12 | | |
| 4) <br><br> 6x3=18 | | |
| 5) <br><br> 10x3=30 | | |
| 6) <br><br> 4x6=24 | | |
| 7) <br><br> 5x6=30 | | |
| 8) <br><br> 6x3=18 | | |

## 1) Skip count by fives:

5, 10, 15, 20, _____, _____,_____, 40, 45, _____, 55, _____, _____, 70

25, _____, _____,_____, 45, 50, _____,_____, 65, 70, 75, _____,_____

## 2) Skip count by twos:

2, 4, _____,_____,10, 12, _____, 16, 18, 20_____,_____,_____, 28

12, 14, _____,_____,_____, 22, 24, 26, _____,_____, 32, 34, 36

## 3) Skip count by tens:

_____, _____,30, 40, 50 _____,_____, _____,_____, 100, _____, 120

40, 50, 60, _____,_____, 90, _____, 110, 120, 130, _____,_____,_____

## 4) Skip-count by the first number until you get to the last number.

7, _____, _____, _____, 35, _____, 49

8, _____, 24, _____, _____, 48, 56

9, 18, _____, _____, 45, _____, 63

## Find the missing addend. You may use subtraction.

1)     22+_____= 25

2)     42+_____= 45

3)     31+_____=35

4)     47+_____= 50

5) 56+_____= 60

6) 1+_____ = 20

7) 29+_____ =30

8) 41+_____= 45

9)  How many grams do the carrots shown below weigh?
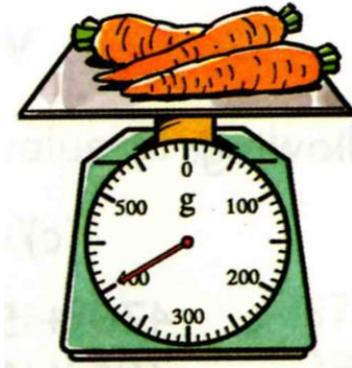


The carrots weigh _____ g

If each carrot weighs 100 g, how many carrots are on the scale?

10)  What do the mushrooms below weigh?
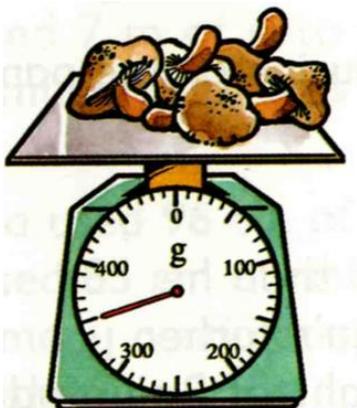


The mushrooms weigh _____ g

Fill in the blanks with <u>heavier than</u>, <u>lighter than</u> or <u>as heavy as</u>.
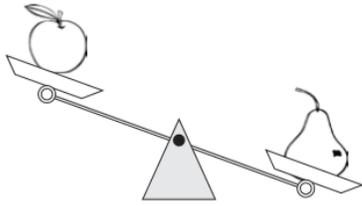
The apple is _____ the pear.

The pear is _____ the apple.
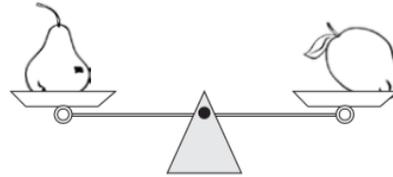
The lemon is _____ the pear.

The pear is _____ the lemon.

_____

Are the following items **heavy** or **light** in your opinion.

_____          _____          _____

_____          _____          _____
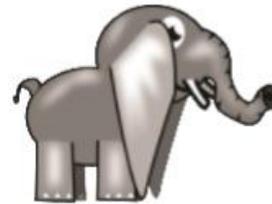
**The number line below shows what time Mrs. Blomgren has dinner. What time does she eat dinner?**

5:00 p.m.                                                                6:00 p.m.

0                                                                60

a) 5:00 p.m.

b) 5:30 p.m.

c) 5:58 p.m.

d) 5:31 p.m.

Find the sums. Regroup when necessary.

1)

| 32 | 13 | 42 | 77 | 59 |
|---|---|---|---|---|
| +59 | +57 | +28 | +16 | +33 |

| 16 | 23 | 33 | 23 | 66 |
|---|---|---|---|---|
| +54 | +37 | +48 | +28 | +19 |

| 37 | 61 | 71 | 58 | 13 |
|---|---|---|---|---|
| +49 | +22 | +19 | +15 | +39 |

2) The capacities of three cups are shown below.



Cup A
160 mL

Cup B
280 mL

Cup C
237 mL

Add to find the total capacity of the three cups.

**1) Circle the object that is more likely to weigh 1 gram:**

paperclip          pencil

water bottle      sheet of paper

Rug                clock

sticker            1 shoe

**2) Circle the object that is more likely to weigh 1 kilogram:**

cellphone          carton of milk

desk               class phone

eraser             hand sanitizer

folder             5 chapter books

**Write the time:**

1.

2.

3.

Mrs. Blomgren weighs 84 kg. When she carries her cat, Nugget, together they weigh 92 kg. How much does Nugget weigh? Show your work.

Nugget weighs _____ kg.

1) Which expression is represented by the model shown below?



A.     3 x 9

B.     9 ÷ 3
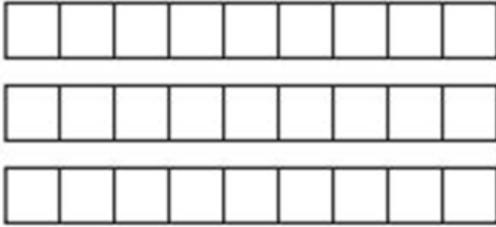
C.     27 x 3

D.     9 ÷ 27

2) Caleb cut a ribbon into four pieces. Three of the pieces are 5 inches long. The other piece is 3 inches long. How long was the ribbon before Caleb cut it?

A.     8 inches

B.     18 inches

C.     15 inches

D.     20 inches

3) Zaymir had 12 farm animal stickers and 20 sea animal stickers. He used all of the stickers to fill an 8-page scrapbook. He put the same number of stickers on each page. How many stickers did he put on each page?

A.     4

B.     32

C.     8

D.     3

| 19 | 13 | 77 | 54 | 77 |
|---|---|---|---|---|
| +34 | +18 | +16 | +36 | +19 |

| 37 | 66 | 32 | 71 | 38 |
|---|---|---|---|---|
| +44 | +29 | +28 | +19 | +17 |

| 38 | 72 | 76 | 55 | 36 |
|---|---|---|---|---|
| +49 | +19 | +15 | +26 | +47 |

| 41 | 36 | 78 | 17 | 74 |
|---|---|---|---|---|
| +49 | +14 | +15 | +78 | +19 |

| 36 | 14 | 39 | 48 | 16 |
|---|---|---|---|---|
| +29 | +38 | +13 | +45 | +38 |

1) Solve the subtraction problems below.

a. 381 mL – 146 mL          b. 730 m – 426 m          c. 509 kg – 384 kg

2) The total length of a banner is 408 centimeters. Aaron paints it in 3 sections. The first 2 sections he paints are 176 centimeters long altogether. How long is the third section?

3) A fifth-grade class sells lemonade to raise funds. After selling 48 liters of lemonade in 1 week, they still have 35 liters of lemonade left. How many liters of lemonade did they have at the beginning?

**1) Find the sum and then round the sum to the <u>nearest ten</u> using the vertical number line.**

| 236+317 | 106+815 | 523+90 |
|---|---|---|
| Actual sum: _____ | Actual sum: _____ | Actual sum: _____ |
| Estimated sum:_____ | Estimated sum:_____ | Estimated sum:_____ |

**2) Show 7:36 p.m. on the number line <u>and</u> clock.**

0   5   10   15   20   25   30   35   40   45   50   55   60

7:00

8:00
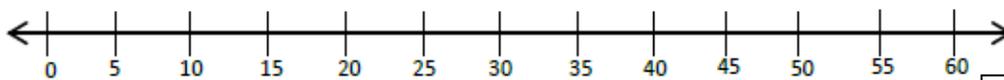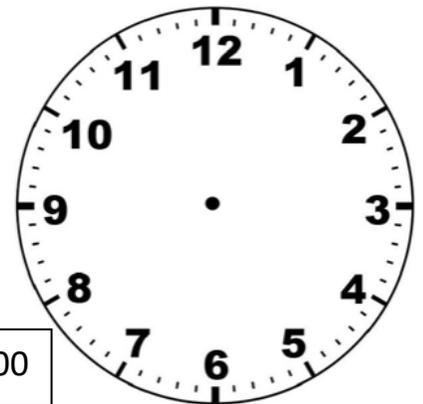
Subtract. Check your work using addition (inverse operation).

| **900-120=____** | **598-399=____** |
|---|---|
| **473-185=____** | **935-219=____** |

1. Label the tape diagrams. Then, fill in the blanks below to make the statements true.

a. **6 × 6** = _____

(5 × 6) = _____                          (_____ × 6) = _____

| 6 | | | | | |
|---|---|---|---|---|---|

> **(6 × 6)** = (5 + 1) × 6
>
>               = (5 × 6) + (1 × 6)
>
>               = __30__ + _____
>
>               = _____

b. **7 × 6** = _____

(5 × 6) = _____                          (_____ × 6) = _____

| 6 | | | | | | |
|---|---|---|---|---|---|---|
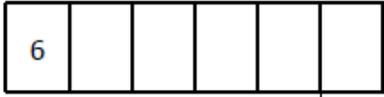
> **(7 × 6)** = (5 + 2) × 6
>
>               = (5 × 6) + (2 × 6)
>
>               = __30__ + _____
>
>               = _____

2. Break apart 54 to solve 54 ÷ 6.

54 ÷ 6

30 ÷ 6        24 ÷ 6

**54 ÷ 6** = (30 ÷ 6) + (_____ ÷ 6)

        = 5 + _____

        = _____
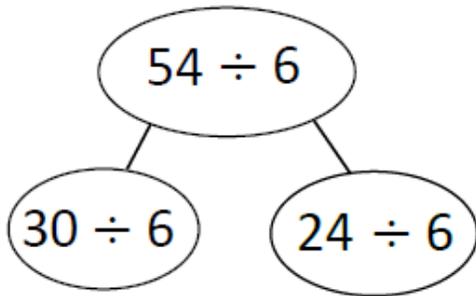
3. Break apart 49 to solve 49 ÷ 7.

49 ÷ 7

35 ÷ 7        ( )

**49 ÷ 7** = (35 ÷ 7) + (_____ ÷ 7)

        = 5 + _____

        = _____
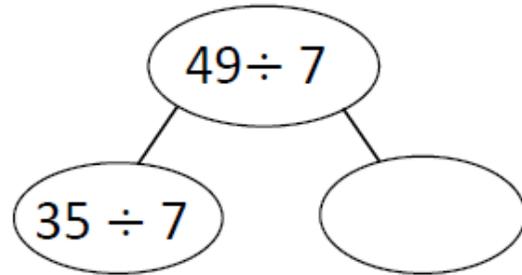
Round each number on the left to the nearest ten and hundred in the chart below.

| Number | Rounded to the nearest <u>ten</u> | Rounded to the nearest <u>hundred</u> |
|--------|-----------------------------------|---------------------------------------|
| 194    |                                   |                                       |
| 835    |                                   |                                       |
| 62     |                                   |                                       |
| 109    |                                   |                                       |
| 1,937  |                                   |                                       |
| 653    |                                   |                                       |
| 788    |                                   |                                       |
| 365    |                                   |                                       |
| 2,042  |                                   |                                       |
| 3,011  |                                   |                                       |
| 457    |                                   |                                       |
| 165    |                                   |                                       |

**Use inverse operations to solve the problems below.**

| | | |
|---|---|---|
| 9 x 5 = _____ <br><br> 45÷9= _____ | 40÷ 8 = _____ <br><br> _____ x 8= 40 | 5 x 6= _____ <br><br> 30÷6= _____ |
| 3 x _____= 15 <br><br> 15÷ 3 = _____ | 5 x _____ = 35 <br><br> 35 ÷ 5= _____ | 5 x 4 = _____ <br><br> _____÷ 4 = 5 |

**Find the difference**

| | | |
|---|---|---|
| 208-173= _____ | 218- 146= _____ | 125-83= _____ |

# Find the total value of the shaded blocks.

1) $9 \times 8 =$

| 8 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
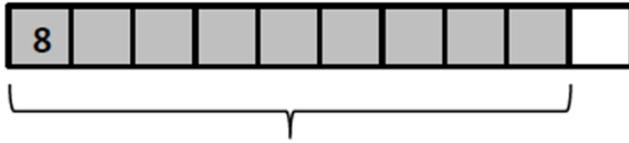
**9 eights** = 10 eights – 1 eight

$= \underline{\hspace{1cm}} - 8$

$= \underline{\hspace{1cm}}$

2)  $6 \times 9 = 54$                                        $8 \times 9 = 72$

What is 10 more than 54? _____           What is 10 more than 72? _____

What is 1 less? _____                         What is 1 less? _____

$7 \times 9 = $ _____                             $9 \times 9 = $ _____

3) Jaylan figures out the answer to $7 \times 9$ by putting down his right index finger (shown). What is the answer? Explain how to use Jaylan's finger strategy.

_____

_____

_____

_____

**Multiply. Then, add the tens digit and ones digit of each product.**

$1 \times 9 =$ 9                    $\underline{\quad 0 \quad} + \underline{\quad 9 \quad} = \underline{\quad 9 \quad}$

$2 \times 9 =$ 18                   $\underline{\quad 1 \quad} + \underline{\quad 8 \quad} = \underline{\qquad}$

$3 \times 9 =$                      $\underline{\qquad} + \underline{\qquad} = \underline{\qquad}$

$4 \times 9 =$                      $\underline{\qquad} + \underline{\qquad} = \underline{\qquad}$

$5 \times 9 =$                      $\underline{\qquad} + \underline{\qquad} = \underline{\qquad}$

$6 \times 9 =$                      $\underline{\qquad} + \underline{\qquad} = \underline{\qquad}$

$7 \times 9 =$                      $\underline{\qquad} + \underline{\qquad} = \underline{\qquad}$

$8 \times 9 =$                      $\underline{\qquad} + \underline{\qquad} = \underline{\qquad}$

$9 \times 9 =$                      $\underline{\qquad} + \underline{\qquad} = \underline{\qquad}$

$10 \times 9 =$                     $\underline{\qquad} + \underline{\qquad} = \underline{\qquad}$

## Multiply to find the product:           ## Fill in the missing factor:

1)          5 x 3  = _____          21)          5 x _____  =  15

2)          2 x 5  = _____          22)          _____ x 5  =  25

3)          5 x 6  = _____          23)          _____ x 5  =  50

4)          8 x 5  = _____          24)          5 x _____  =  10

5)          4 x 5  = _____          25)          5 x _____  =  5

6)          5 x 7  = _____          26)          _____ x 5  =  60

7)        12 x 5  = _____          27)          _____ x 5  =  45

8)          9 x 5  = _____          28)          5 x _____  =  35

9)          5 x 10  = _____          29)          5 x _____  =  30

10)        10 x 5  = _____          30)          _____ x 5  =  20

11)          5 x 5  = _____          31)          5 x _____  =  0

12)          5 x 8  = _____          32)          _____ x 5  =  35

13)          7 x 5  = _____          33)          5 x _____  =  45

14)          5 x 9  = _____          34)          _____ x 5  =  55

15)          6 x 5  = _____          35)          5 x _____  =  40

16)        11 x 5  = _____          36)          5 x _____  =  30

17)          5 x 8  = _____          37)          _____ x 5  =  20

18)          0 x 5  = _____          38)          _____ x 5  =  0

19)        12 x 5  = _____          39)          5 x _____  =  60

20)          1 x 5  = _____          40)          _____ x 5  =  15

1) Place parentheses in the equations to find the related fact. Then, solve.

a.  $4 \times 20 = 4 \times 2 \times 10$

$= 4 \times 2 \times 10$

$=$ _____ $\times 10$

$=$ _____

b.  $3 \times 30 = 3 \times 3 \times 10$

$= 3 \times 3 \times 10$

$=$ _____ $\times 10$

$=$ _____

**Find the sum.**

1) 4 + 2 + 17 = _____

2) 4 + 7 + 13 = _____

3) 24 + 3 + 5 = _____

4) 42 + 6 + 4 = _____

5) 61 + 6 + 2 = _____

6) 6 + 2 + 58 = _____

7) 71 + 6 + 2 = _____

8) 30 + 2 + 5 = _____

9) 4 + 4 + 84 = _____

10) 91 + 3 + 6 = _____

11) 3 + 15 + 5 = _____

12) 92 + 2 + 8 = _____

**Name each shape below on the line provided.**

_____          _____          _____

_____          _____
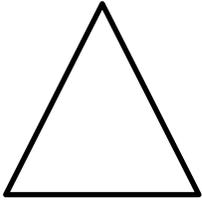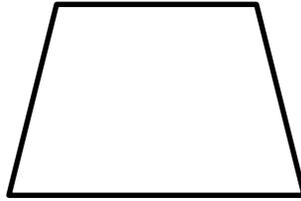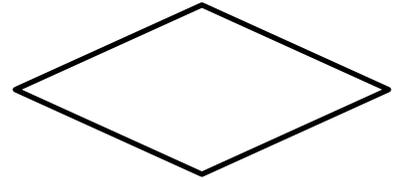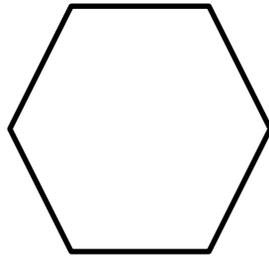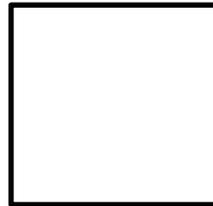
Wilma and Freddie use pattern blocks to make shapes as shown. Freddie says his shape has a bigger area than Wilma's because it is longer than hers. Is he right? Explain your answer.

Wilma's Shape          Freddie's Shape

_____

_____

_____

_____
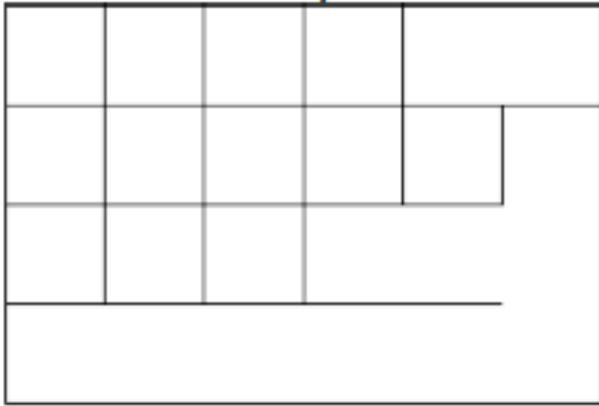
### Array 1

Rows: _____

Columns: ____

Equation: _____ X _____= _____

Area: _____

### Array 2
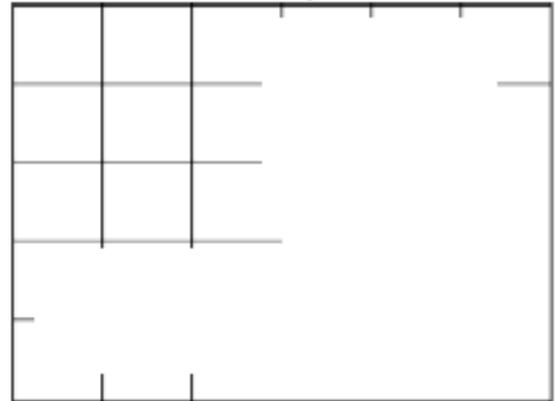
Rows: _____

Columns: _____

Equation: _____ X _____= _____

Area:_____

## What is the area of the grid below?

Area: _____

## Find the product

| 8 | 3 | 10 | 8 | 5 | 11 | 2 | 4 | 1 |
|---|---|----|---|---|----|---|---|---|
| × 5 | × 1 | × 0 | × 1 | × 5 | × 1 | × 5 | × 2 | × 10 |

| 3 | 12 | 12 | 3 | 9 | 10 | 2 | 4 | 3 |
|---|----|----|---|---|----|---|---|---|
| × 10 | × 0 | × 10 | × 5 | × 0 | × 5 | × 1 | × 1 | × 0 |

| 6 | 9 | 5 | 10 | 2 | 1 | 10 | 1 | 4 |
|---|---|---|----|---|---|----|---|---|
| × 2 | × 2 | × 0 | × 10 | × 2 | × 1 | × 2 | × 0 | × 5 |

| 1 | 2 | 5 | 11 | 7 | 6 | 8 | 7 | 9 |
|---|---|---|----|---|---|---|---|---|
| × 5 | × 0 | × 2 | × 5 | × 1 | × 0 | × 2 | × 10 | × 5 |

| 3 | 6 | 2 | 12 | 9 | 10 | 11 | 11 | 7 |
|---|---|---|----|---|----|----|----|---|
| × 2 | × 1 | × 10 | × 2 | × 1 | × 1 | × 0 | × 2 | × 2 |

**Messiah says the rectangle on the left has the same area as the sum of the two on the right. Jamell says they do not have the same areas. Who is correct? Explain using numbers, pictures, and words.**
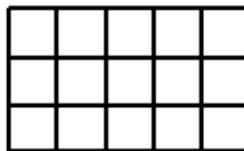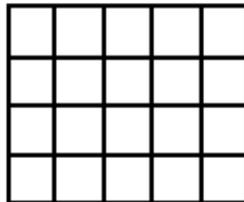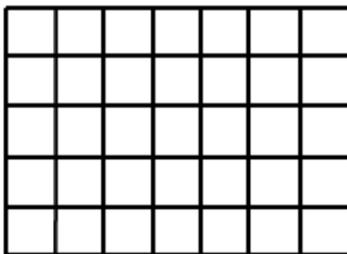
**1) Use the grid below to answer the following questions.**
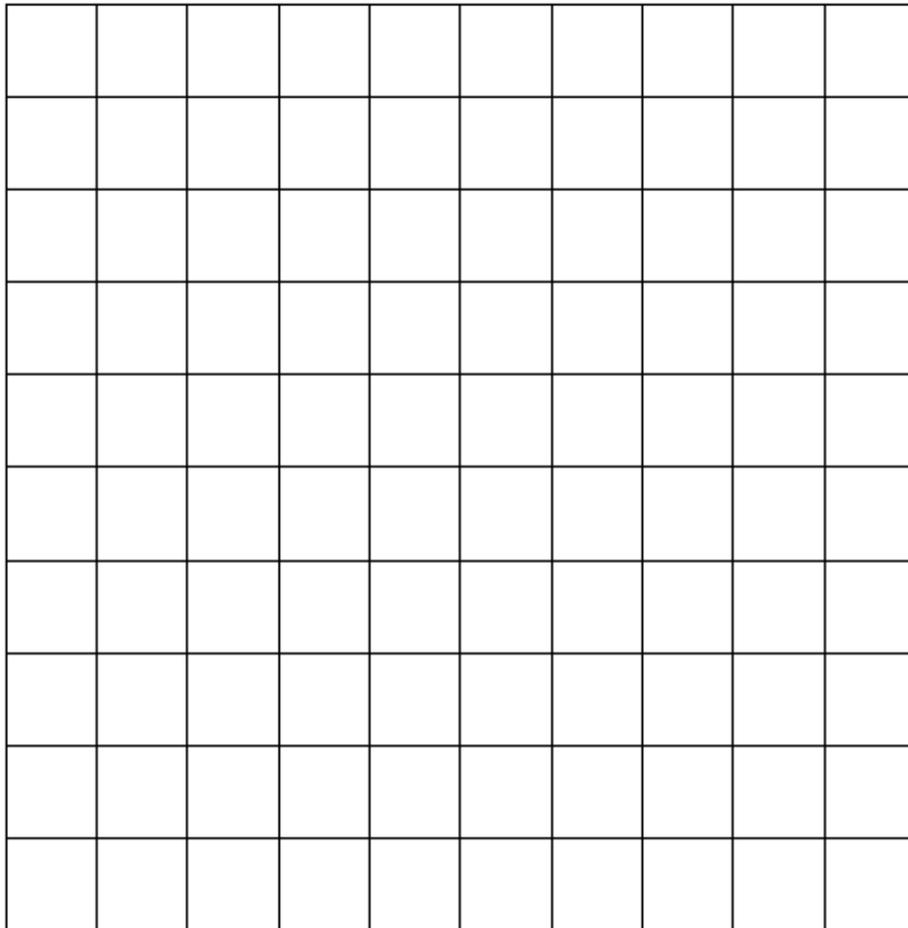
_____a. Draw a line to divide the grid into 2 equal rectangles. _Shade in 1 of the rectangles that you created._

_____b. Label the side lengths of each rectangle.

_____c. Write an equation to show the total area of the 2 rectangles.

**1) Use the shape to answer the questions below**
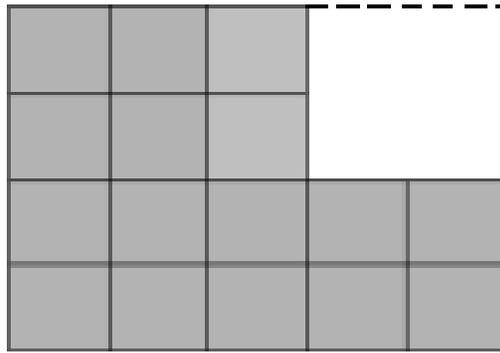


a. Break apart the shaded figure into 2 rectangles. Then, add to find the area of the shaded figure below.

b. Subtract the area of the unshaded rectangle from the area of the large rectangle to check your answer in Part a

**2) Find the area of each shape below by adding the area of the shaded and unshaded rectangles.**
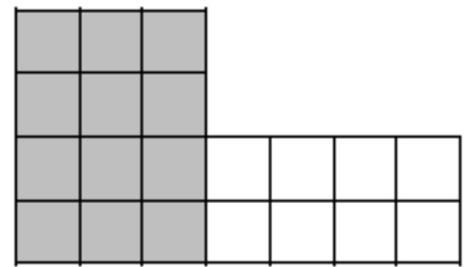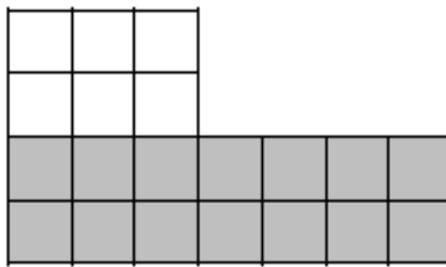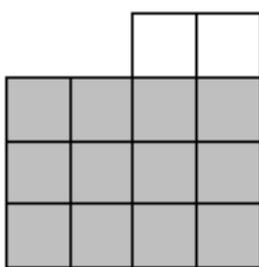
## 1) Find the area of the figure below

10 m

C

6 m

A

3 m

B

17 m
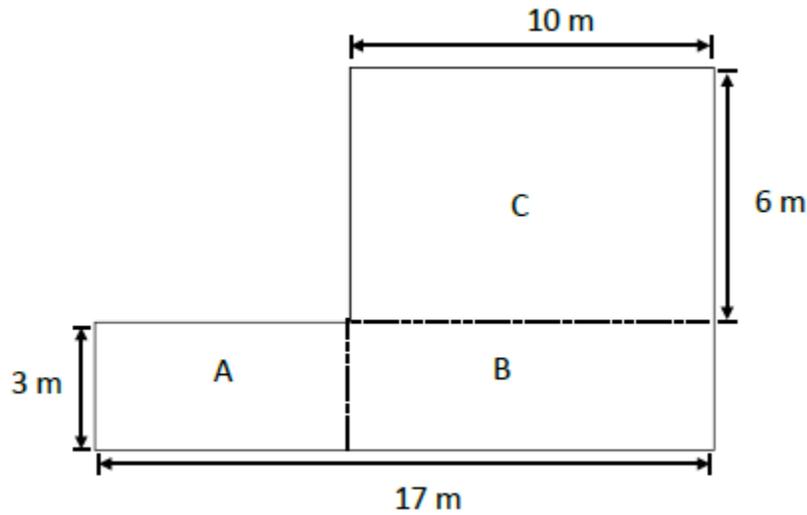
A: _____

B: _____

C: _____

## 2) Draw a picture of the designated unit fraction using a circle.

1

| $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{1}{4}$ | $\frac{1}{4}$ |
|---|---|---|---|
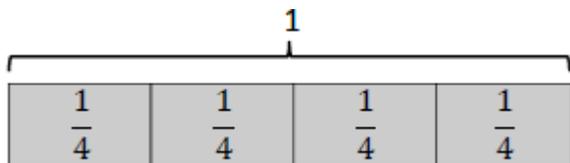
**1) What is the area of the rectangle below?**

5 cm

4 cm    Area: _____ sq cm
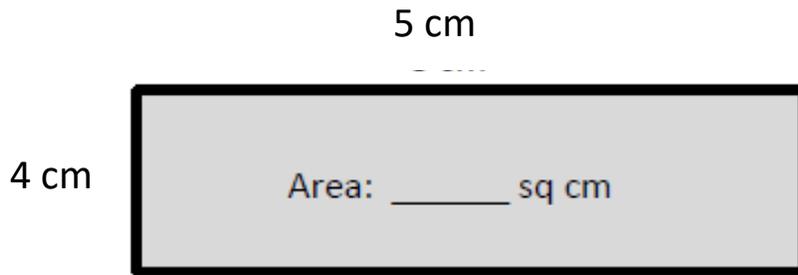
A. 9 sq cm

B. 1 sq cm

C. 20 sq cm

D. 14 sq cm

**2) How many square units does the rectangle below have?**
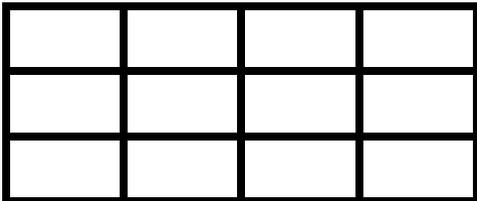
A. 3

B. 6

C. 9

D. 12

**3) Is a circle a polygon? Why or why not?**

_____

_____

_____

## 1) What could be the area of the rectangle below?



**2 cm**
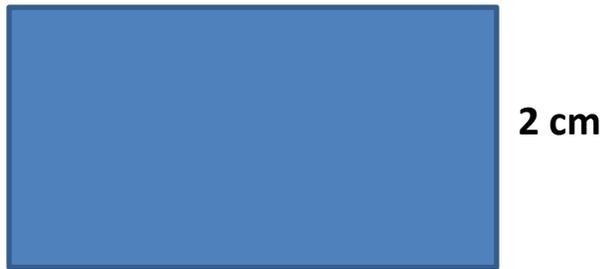
A. 8 square inches

B. 5 square centimeters

C. 9 square centimeters

D. 8 square centimeters

## 2) The area of a shape is:

A. How long it is

B. How many square units are inside the shape

C. How wide it is

D. The sum of its sides

## 3) Which is greater, 5 inches or 5 centimeters? Explain

_____

_____

_____

_____

# MULTIPLYING WITH ARRAYS

**Part 1: Describing Arrays** — For each array, write in the number of rows and columns. Then write each as an addition problem (counting by rows) and a multiplication problem (rows x columns). The first one is completed for you as an example.

1.

rows: _____2_____

columns: _____3_____

addition: _____3 + 3 = 6_____

multiplication: _____2 x 3 = 6_____

2.

rows: _____

columns: _____

addition: _____

multiplication: _____

3.

rows: _____

columns: _____

addition: _____

multiplication: _____

4.

rows: _____

columns: _____

addition: _____

multiplication: _____

5.

rows: _____

columns: _____

addition: _____

multiplication: _____

6.
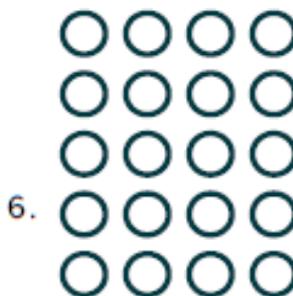
rows: _____

columns: _____

addition: _____

multiplication: _____

**Part 2: Shading Arrays** — Shade in each array on the grid provided.

1. 3 x 2

2. 3 x 4

3. 6 x 5

4. 7 x 7

5. 3 x 9

6. 8 x 1