Name: _____

Multiplication with Arrays

When you multiply, think of the multiplication symbol as having the meaning "rows of."

The fact 3 x 6 would actually mean "3 rows of 6."

To solve this fact, draw 3 rows of 6 symbols.

x x x x x x
x x x x x x
x x x x x x

3 rows of 6 symbols equals 18 symbols.
3 x 6 = 18

Symbols arranged in neat rows and columns are called arrays.

Look at each array. Count the symbols in each row and column carefully. Write the multiplication fact for each.

1. O O O O O O O O
O O O O O O O O
O O O O O O O O
O O O O O O O O

_____ rows of _____ equals _____

_____ x _____ = _____

2. | | | | | | | | |

_____ rows of _____ equals _____

_____ x _____ = _____

3. ◆ ◆ ◆ ◆
◆ ◆ ◆ ◆
◆ ◆ ◆ ◆
◆ ◆ ◆ ◆

_____ rows of _____ equals _____

_____ x _____ = _____

Now try this: On the back of this paper, draw an array for each of these facts:

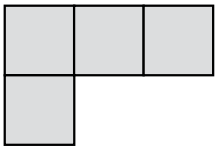
7 x 4 ***8 x 3*** ***9 x 6*** ***3 x 7*** ***8 x 5***

Name: _____

Area

Area is the number of **square units** that will fit inside a figure.

The area of this figure is **4 square units**.



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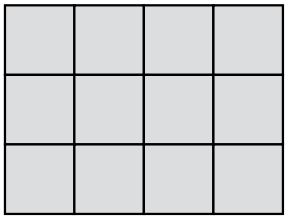
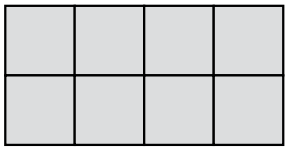
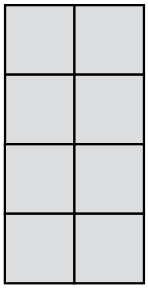
① 

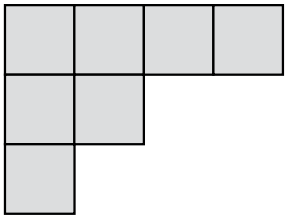
Area = _____

② 

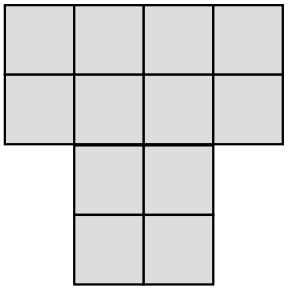
Area = _____

③ 

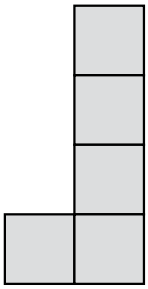
Area = _____

④ 

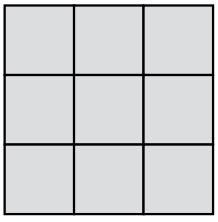
Area = _____

⑤ 

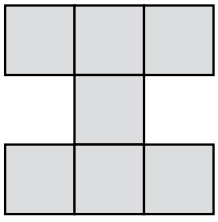
Area = _____

⑥ 

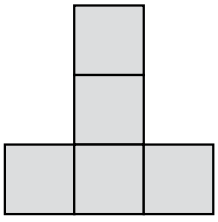
Area = _____

⑦ 

Area = _____

⑧ 

Area = _____

⑨ 

Area = _____

Name: _____

Multiplication with Arrays

You can find the answer to basic multiplication facts by making a symbol picture called an array.

An array is a group of symbols arranged in straight rows and columns.

x x x x x x x
x x x x x x x
x x x x x x x

3 rows of 7 symbols equals 21 symbols.
3 x 7 = 21

Draw an array to find the answer to each multiplication fact below.
Be sure you draw your symbols in neat, straight rows and columns.

4 x 5 = _____

6 x 4 = _____

3 x 8 = _____

3 x 9 = _____

5 x 8 = _____

7 x 4 = _____

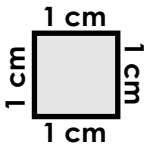
4 x 9 = _____

5 x 5 = _____

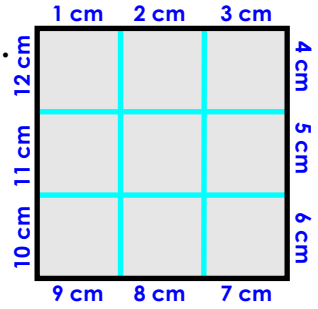
Name: _____

Perimeter of a Shape

Find the perimeter of each shape.

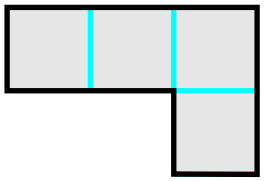


a.

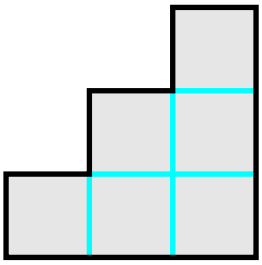


12 cm

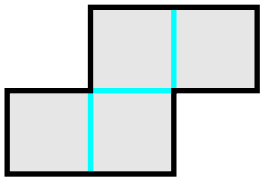
b.



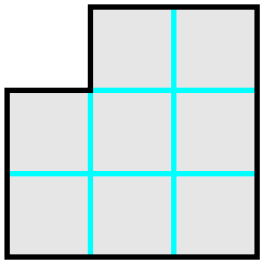
c.



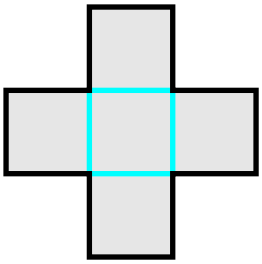
d.



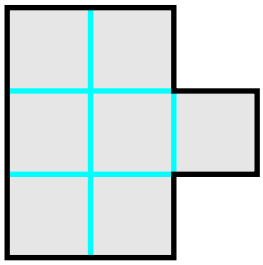
e.



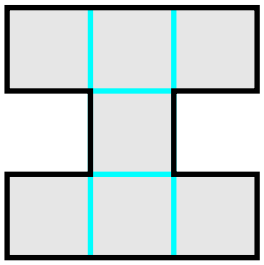
f.



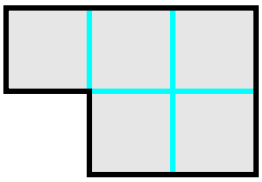
g.



h.



i.

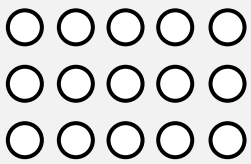


Name: _____

Fact Family Arrays

Write a fact family shown by each array.

example



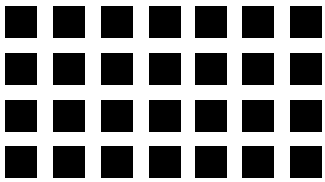
3 X 5 = 15

5 X 3 = 15

15 ÷ 3 = 5

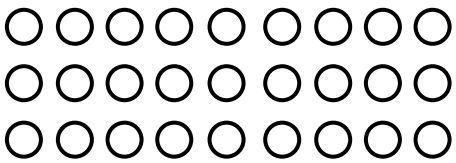
15 ÷ 5 = 3

a.

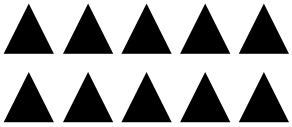


b.

c.

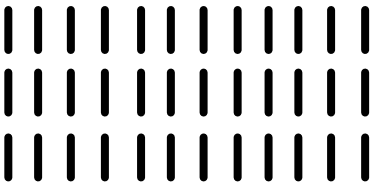


d.

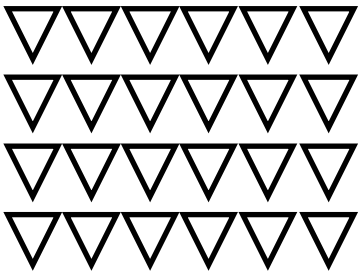


e.

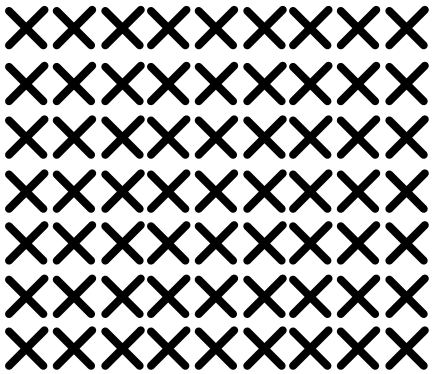
f.



g.



h.

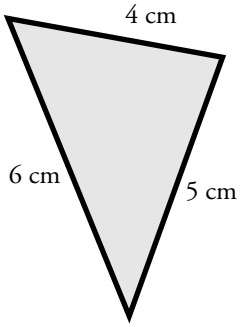


Name: _____

Perimeter of a Polygon

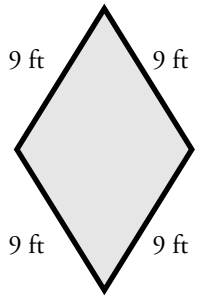
Find the perimeter of each shape by adding the lengths of each side. Be sure to include the units in your answer.

a.



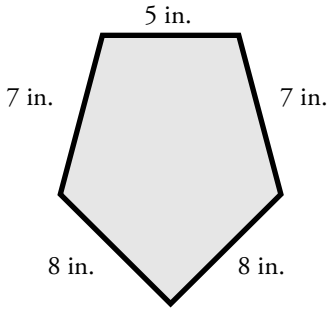
_____

b.



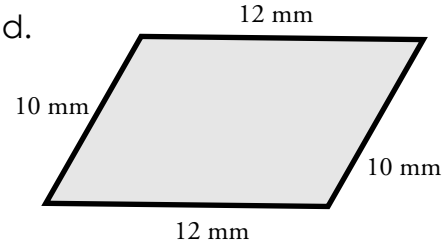
_____

c.



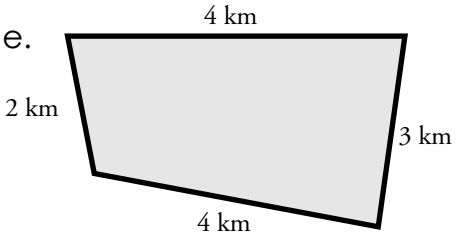
_____

d.



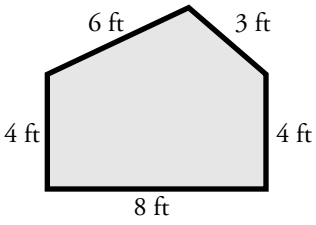
_____

e.



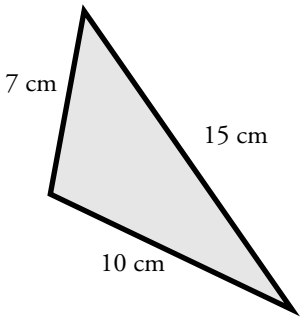
_____

f.



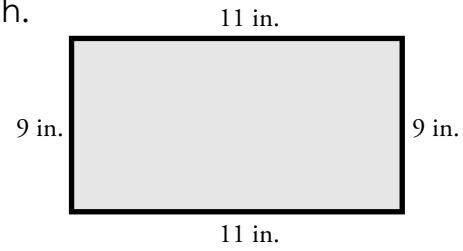
_____

g.



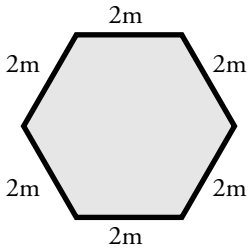
_____

h.



_____

i.

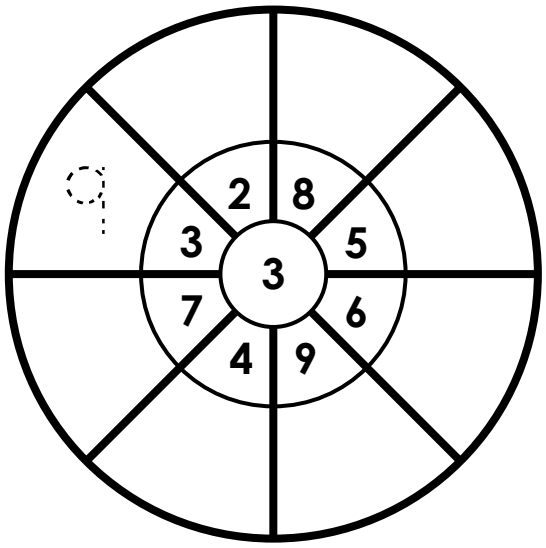


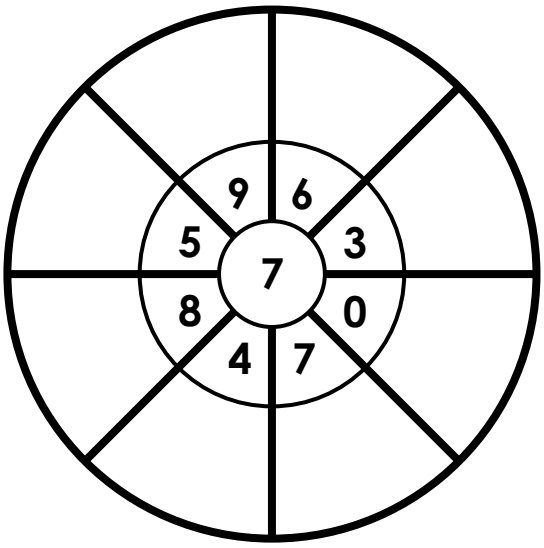
_____

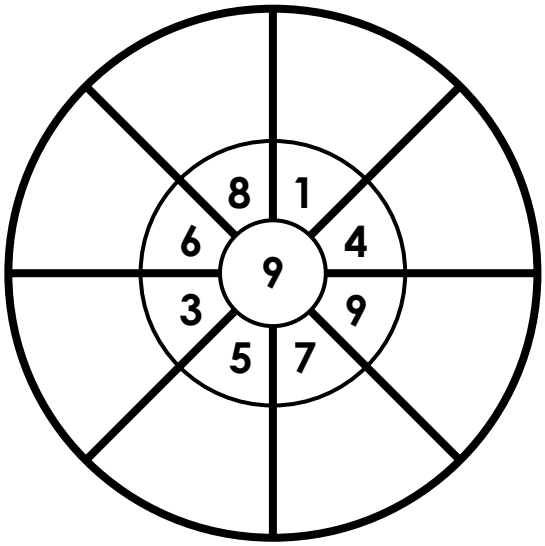
Name: _____ Basic Facts 0-9

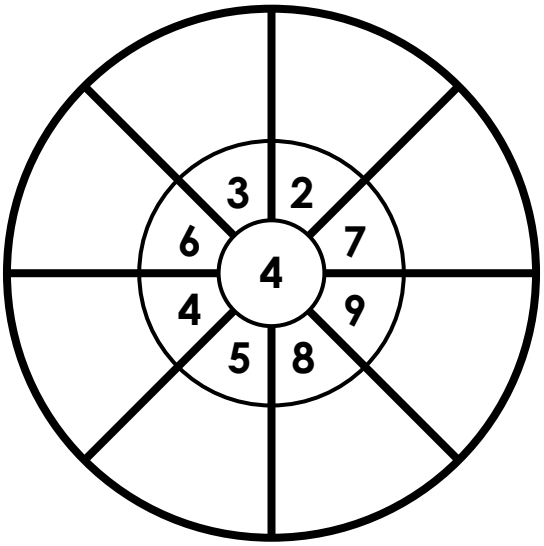
Multiplication Wheels

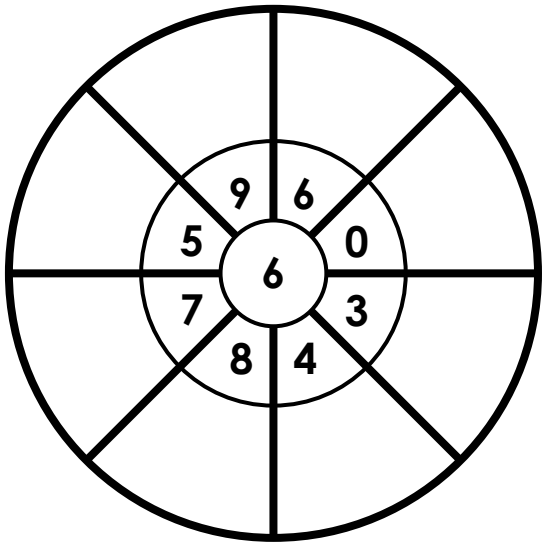
Multiply the number in the center circle by each of the factors surrounding it. Write the products on the outer circle.

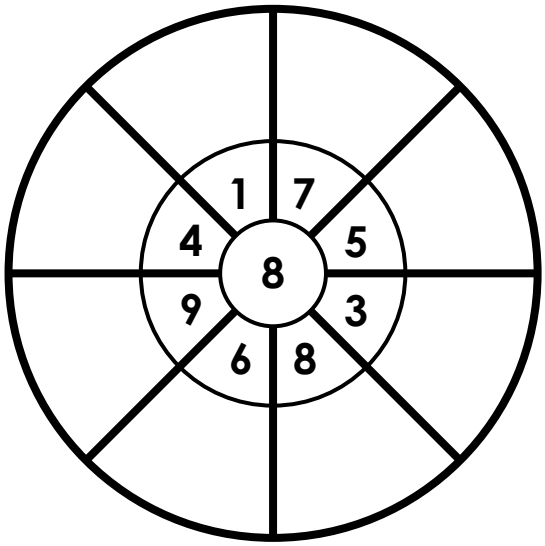










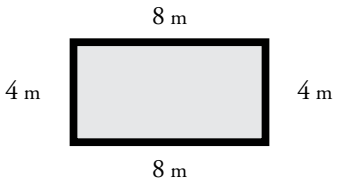


Name: _____

Perimeter

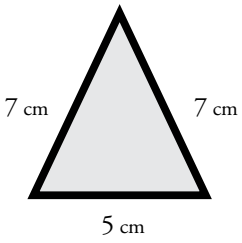
Find the perimeter of each polygon.

a.



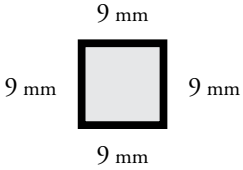
Perimeter = _____

b.



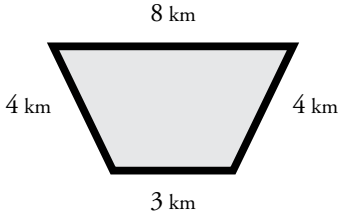
Perimeter = _____

c.



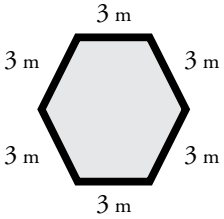
Perimeter = _____

d.



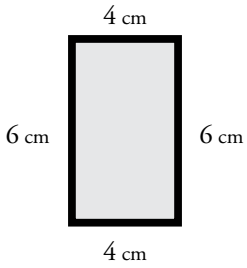
Perimeter = _____

e.



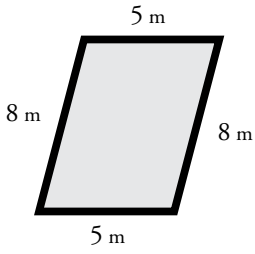
Perimeter = _____

f.



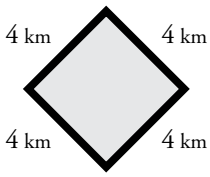
Perimeter = _____

g.



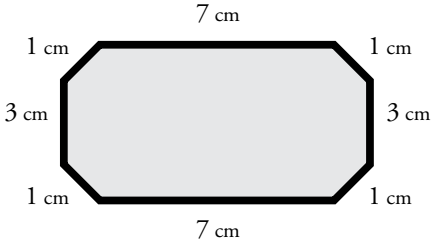
Perimeter = _____

h.



Perimeter = _____

i.



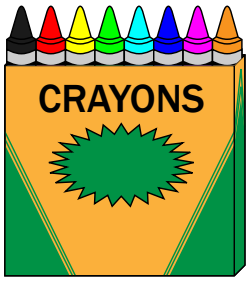
Perimeter = _____

Bonus Box: Write the names of the polygons pictured above.

Name: _____

Multiplication Word Problems

a.



Jacob bought 6 packs of crayons. How many crayons does he have in all?

_____ x _____ = _____

b.

The store has 9 boxes of t-shirts. How many t-shirts do they have altogether?

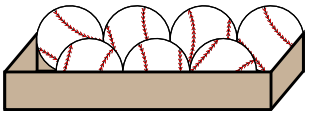
_____ x _____ = _____

c.

Jennifer has 8 packs of gum. How many sticks of gum does she have in all?

_____ x _____ = _____

d.



Coach Johnson bought 7 boxes of baseballs. How many baseballs does he have in all?

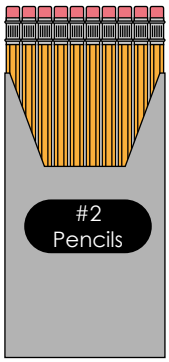
_____ x _____ = _____

e.

Marcus bought 7 bottles of orange juice. How many total ounces does he have?

_____ x _____ = _____

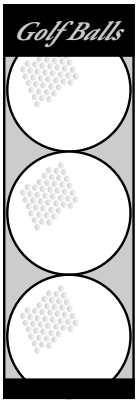
f.



Mrs. Janice bought 10 boxes of pencils for her class. How many pencils does she have in all?

_____ x _____ = _____

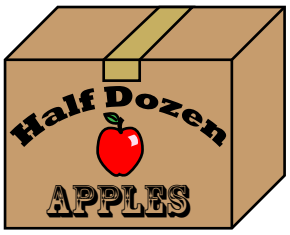
g.



Chris buys 8 packs of golf balls. How many golf balls does he have altogether?

_____ x _____ = _____

★



Carla has 5 boxes of apples. How many total apples does she have?

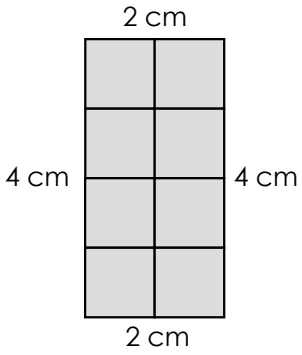
_____ x _____ = _____

Name: _____

Area & Perimeter

Perimeter is the distance around a shape.
To find the perimeter, add the length of each side.

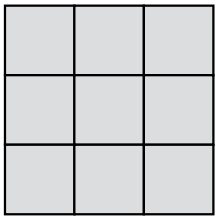
Area is the number of square units that can fit inside of a shape.
To find the area, count the square units.



Perimeter = 12 cm

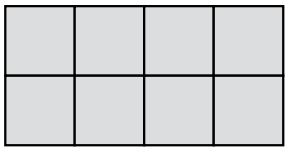
Area = 8 cm^2

Directions: First, label the length of sides of each polygon.
Then, add to find the perimeter.
After that, count the squares to find the area.
(Be sure you write **cm** next to each answer for perimeter and **cm^2** next to each answer for area.)

① 

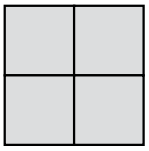
P = _____

A = _____

② 

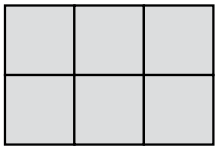
P = _____

A = _____

③ 

P = _____

A = _____

④ 

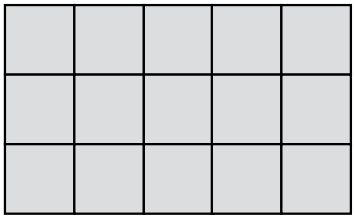
P = _____

A = _____

⑤ 

P = _____

A = _____

⑥ 

P = _____

A = _____

Multiplication Facts

1 x 0 = 0	2 x 0 = 0	3 x 0 = 0	4 x 0 = 0	5 x 0 = 0	6 x 0 = 0
1 x 1 = 1	2 x 1 = 2	3 x 1 = 3	4 x 1 = 4	5 x 1 = 5	6 x 1 = 6
1 x 2 = 2	2 x 2 = 4	3 x 2 = 6	4 x 2 = 8	5 x 2 = 10	6 x 2 = 12
1 x 3 = 3	2 x 3 = 6	3 x 3 = 9	4 x 3 = 12	5 x 3 = 15	6 x 3 = 18
1 x 4 = 4	2 x 4 = 8	3 x 4 = 12	4 x 4 = 16	5 x 4 = 20	6 x 4 = 24
1 x 5 = 5	2 x 5 = 10	3 x 5 = 15	4 x 5 = 20	5 x 5 = 25	6 x 5 = 30
1 x 6 = 6	2 x 6 = 12	3 x 6 = 18	4 x 6 = 24	5 x 6 = 30	6 x 6 = 36
1 x 7 = 7	2 x 7 = 14	3 x 7 = 21	4 x 7 = 28	5 x 7 = 35	6 x 7 = 42
1 x 8 = 8	2 x 8 = 16	3 x 8 = 24	4 x 8 = 32	5 x 8 = 40	6 x 8 = 48
1 x 9 = 9	2 x 9 = 18	3 x 9 = 27	4 x 9 = 36	5 x 9 = 45	6 x 9 = 54
1 x 10= 10	2 x 10= 20	3 x 10= 30	4 x 10= 40	5 x 10= 50	6 x 10= 60
1 x 11= 11	2 x 11= 22	3 x 11= 33	4 x 11= 44	5 x 11= 55	6 x 11= 66
1 x 12= 12	2 x 12= 24	3 x 12= 36	4 x 12= 48	5 x 12= 60	6 x 12= 72

7 x 0 = 0	8 x 0 = 0	9 x 0 = 0	10 x 0 = 0	11 x 0 = 0	12 x 0 = 0
7 x 1 = 7	8 x 1 = 8	9 x 1 = 9	10 x 1 = 10	11 x 1 = 11	12 x 1 = 12
7 x 2 = 14	8 x 2 = 16	9 x 2 = 18	10 x 2 = 20	11 x 2 = 22	12 x 2 = 24
7 x 3 = 21	8 x 3 = 24	9 x 3 = 27	10 x 3 = 30	11 x 3 = 33	12 x 3 = 36
7 x 4 = 28	8 x 4 = 32	9 x 4 = 36	10 x 4 = 40	11 x 4 = 44	12 x 4 = 48
7 x 5 = 35	8 x 5 = 40	9 x 5 = 45	10 x 5 = 50	11 x 5 = 55	12 x 5 = 60
7 x 6 = 42	8 x 6 = 48	9 x 6 = 54	10 x 6 = 60	11 x 6 = 66	12 x 6 = 72
7 x 7 = 49	8 x 7 = 56	9 x 7 = 63	10 x 7 = 70	11 x 7 = 77	12 x 7 = 84
7 x 8 = 56	8 x 8 = 64	9 x 8 = 72	10 x 8 = 80	11 x 8 = 88	12 x 8 = 96
7 x 9 = 63	8 x 9 = 72	9 x 9 = 81	10 x 9 = 90	11 x 9 = 99	12 x 9 =108
7 x 10= 70	8 x 10= 80	9 x 10= 90	10 x 10=100	11 x 10=110	12 x 10=120
7 x 11= 77	8 x 11= 88	9 x 11= 99	10 x 11=110	11 x 11=121	12 x 11=132
7 x 12= 84	8 x 12= 96	9 x 12=108	10 x 12=120	11 x 12=132	12 x 12=144