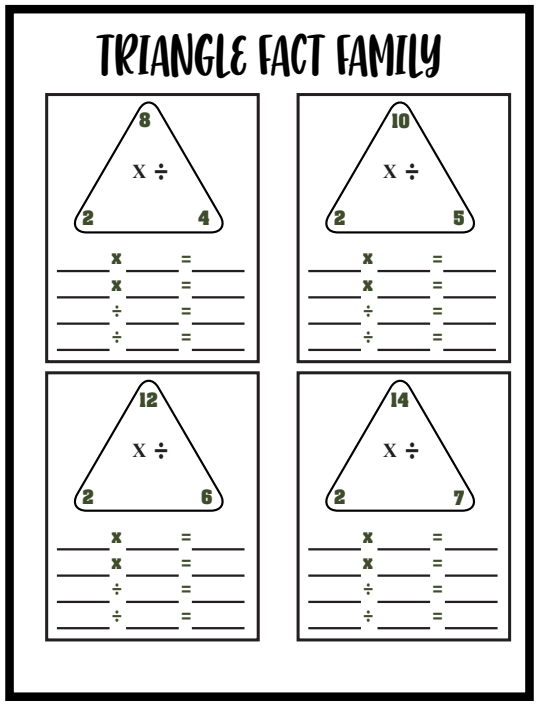
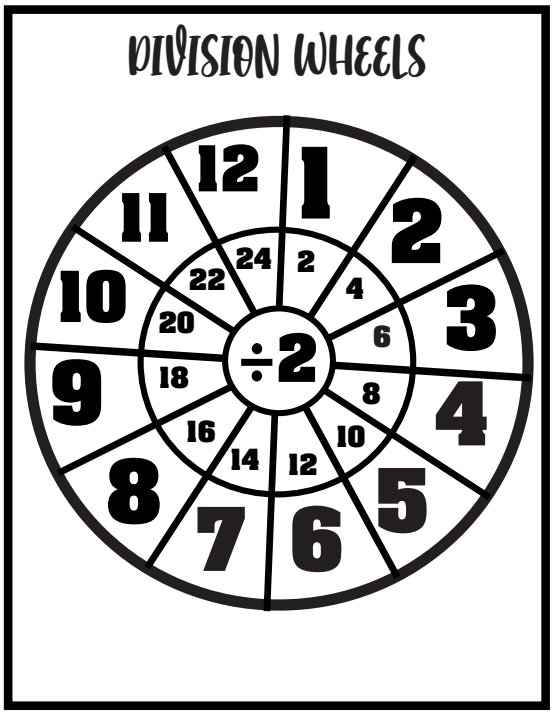
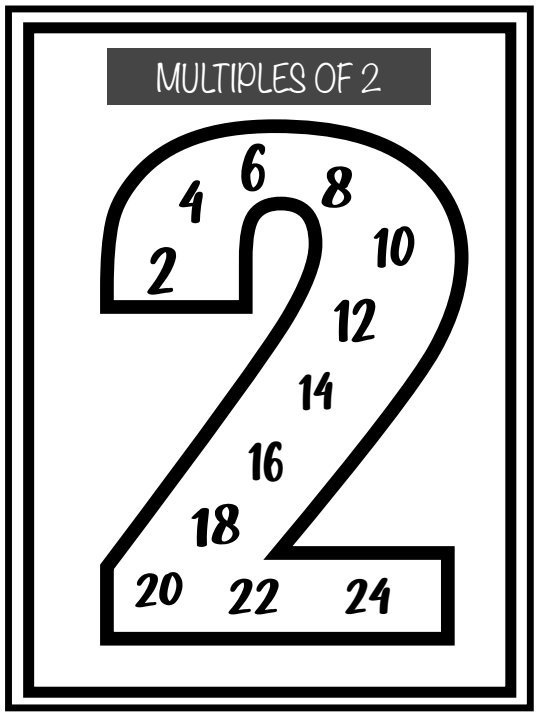
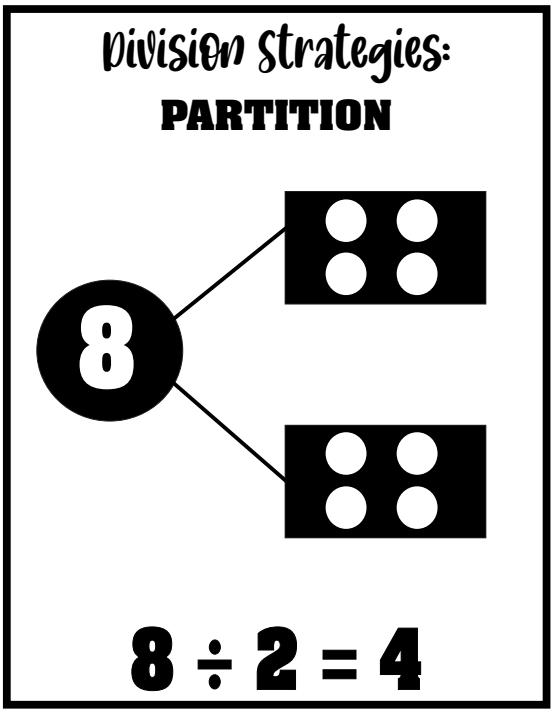
DIVIDING by 2

WORK BOOKLET ANSWER KEY





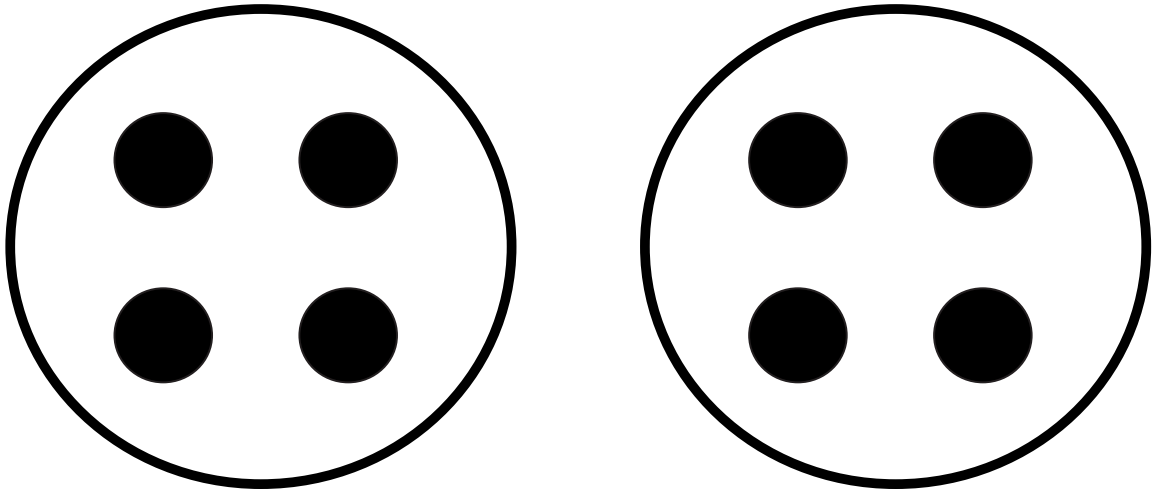




STRATEGY POSTER

When dividing by 2, think multiplication! 2 x ? = 8

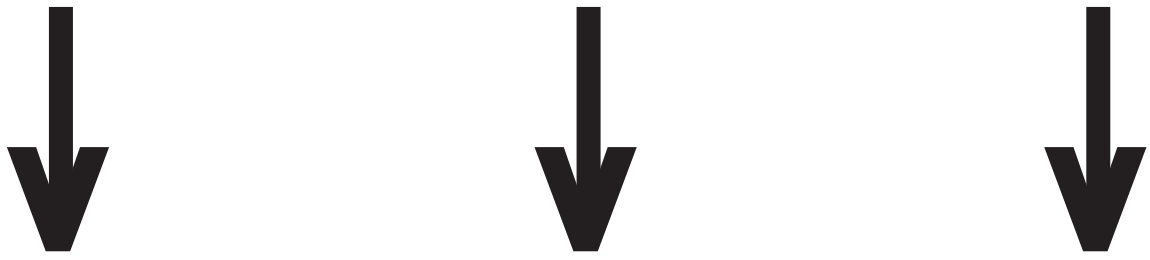
8 ÷ 2 = 4



Hint: Think multiplication! 2 x ? = 8

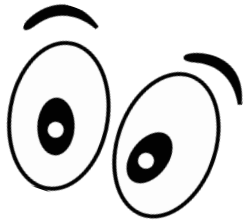
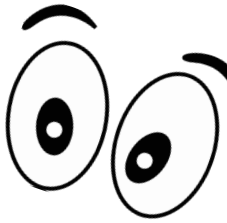
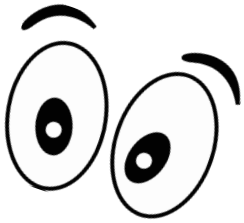
DIVISION

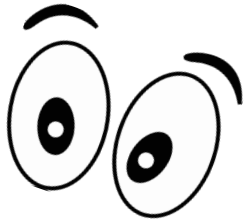
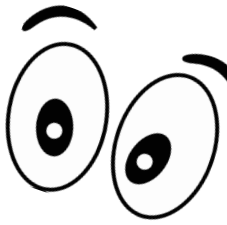
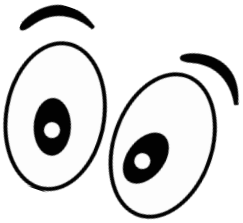
$$16 \div 2 = 8$$

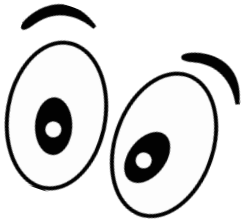
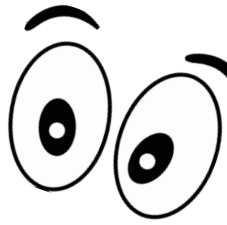
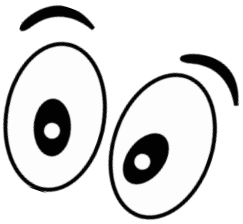


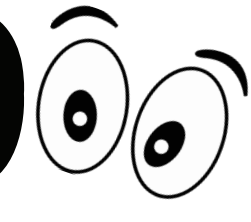
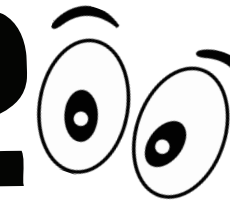
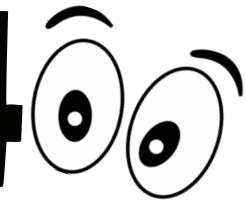
DIVIDEND DIVISOR QUOTIENT

MULTIPLES OF TWO

2  4  6 

8  10  12 

14  16  18 

20  22  24 

MULTIPLES OF TWO

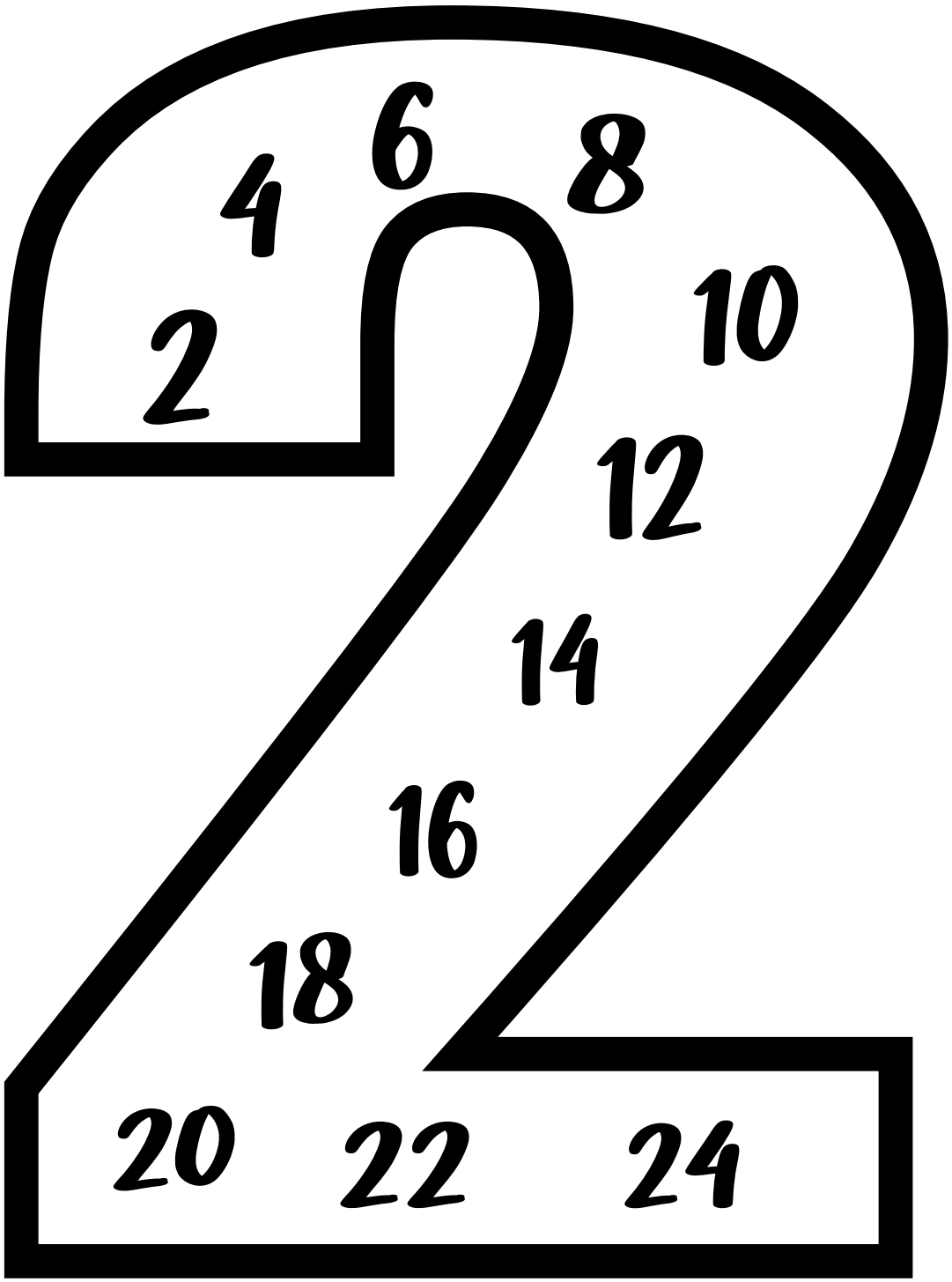
2  4  6 

8  10  12 

14  16  18 

20  22  24 

MULTIPLES OF 2

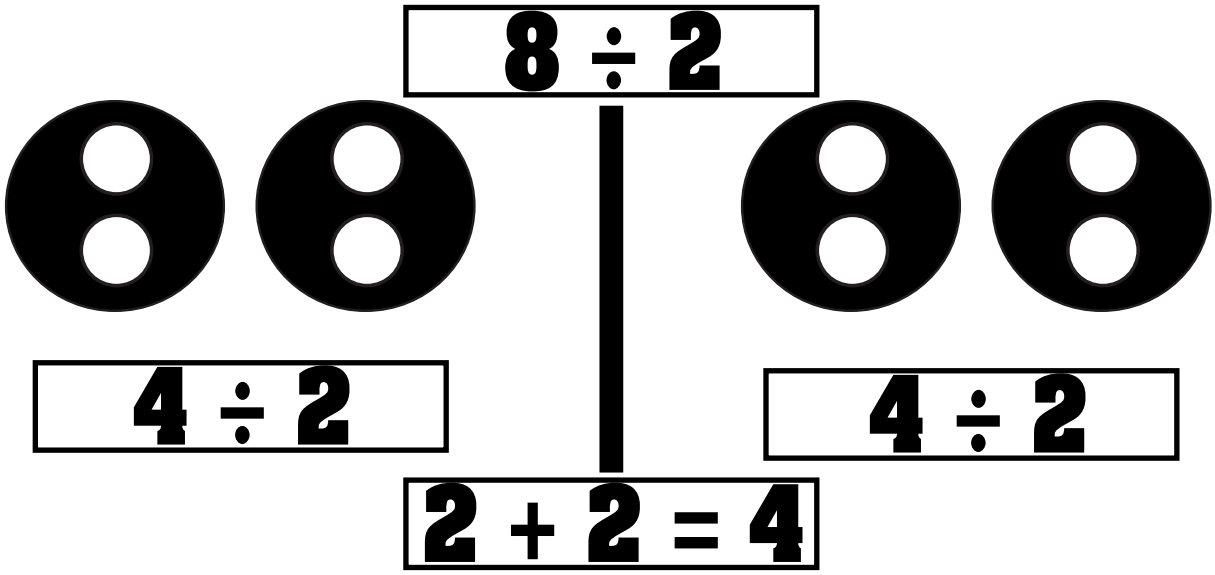


VOCABULARY

DISTRIBUTIVE PROPERTY

There were 8 marbles. I put 2 in each bag. How many bags did I use?

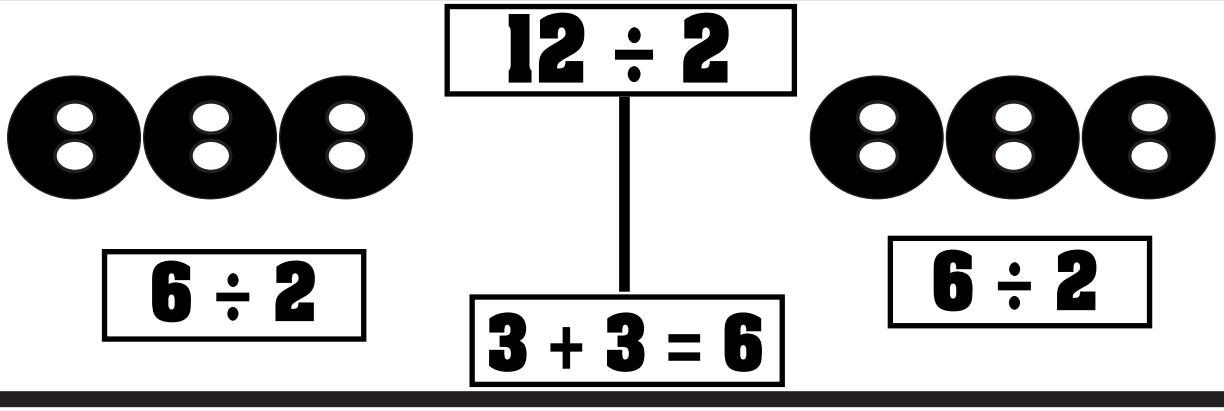
$$8 \div 2 = (4 \div 2) + (4 \div 2) = 2 + 2 = 4$$



MODEL THE FACT

There were 12 marbles. I put 2 in each bag. How many bags did I use?

$$12 \div 2 = (6 \div 2) + (6 \div 2)$$

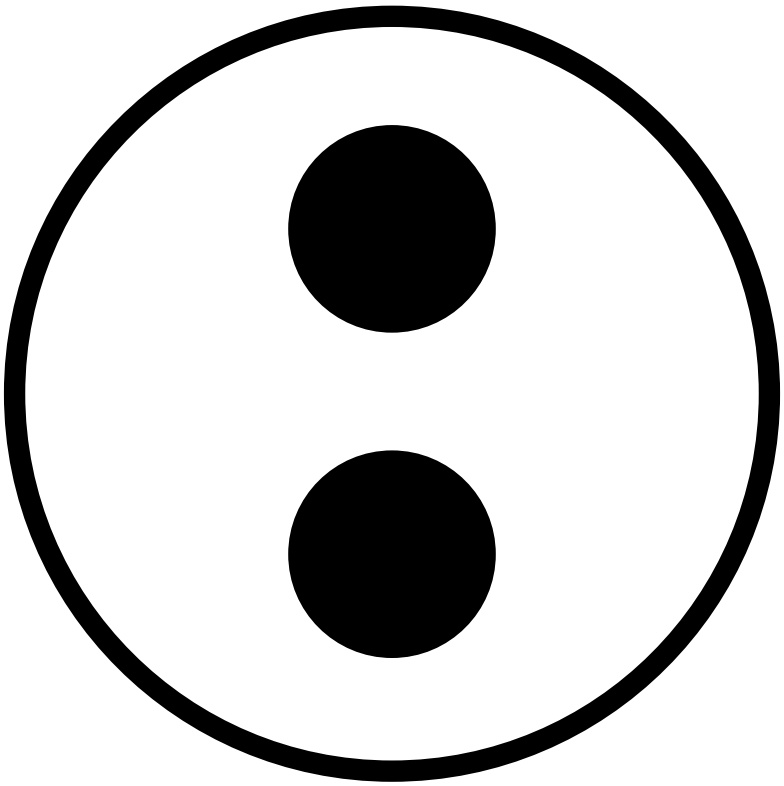


IDENTITY PROPERTY

DIVIDING A NUMBER BY 1

$$2 \div 1 = 2$$

$10 \div 1$ $5 \div 1$ $7 \div 1$



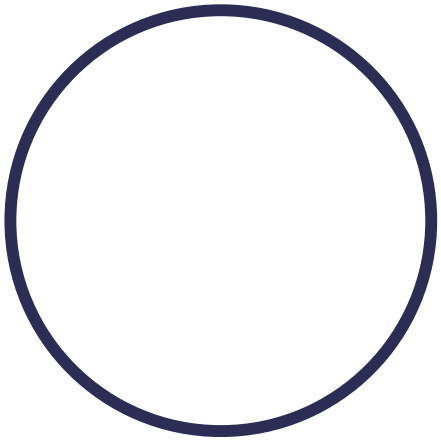
Hint : It's always the number when you divide by 1.

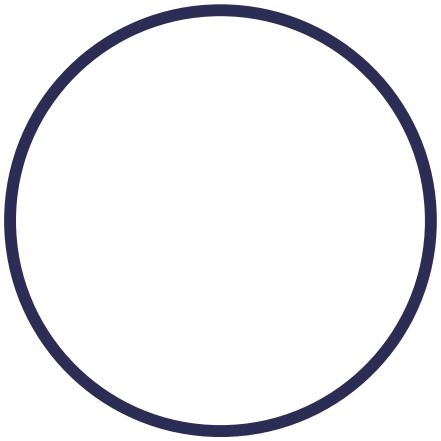
ZERO PROPERTY

DIVIDING 0 BY A NUMBER

$$0 \div 2 = 0$$

$0 \div 8$ $0 \div 1$ $0 \div 2$





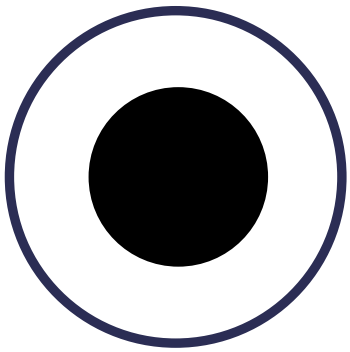
Hint: It's always 0 when you divide zero by a number.

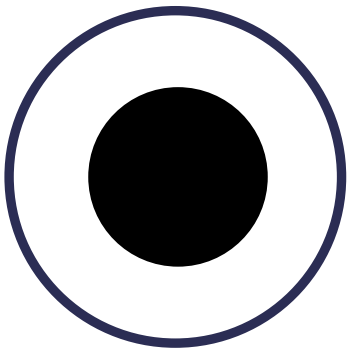
DIVISION BY ITSELF PROPERTY

DIVIDING A NUMBER BY ITSELF

$$2 \div 2 = 1$$

$10 \div 10$ $5 \div 5$ $8 \div 8$

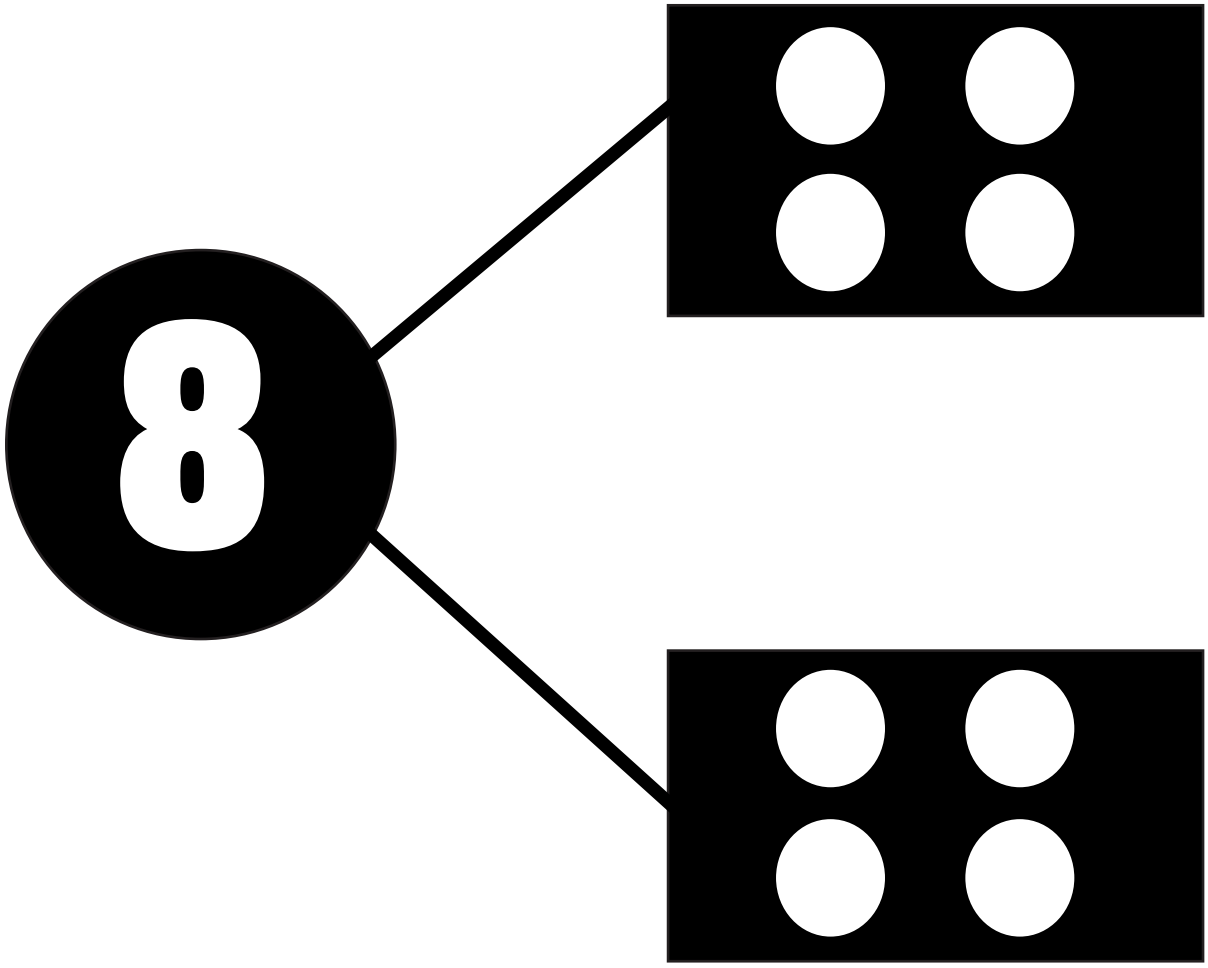




Hint : It's always 1 when you divide a number by itself.

Division Strategies:

PARTITION

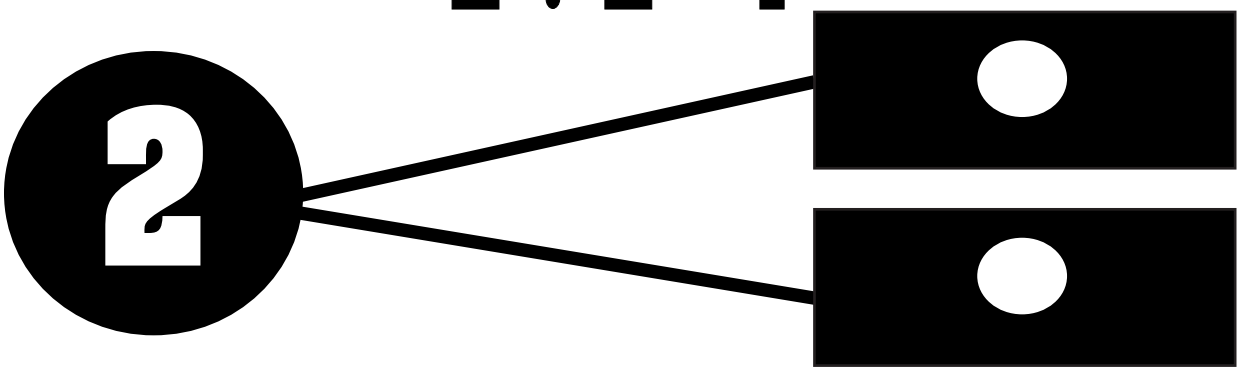


8 ÷ 2 = 4

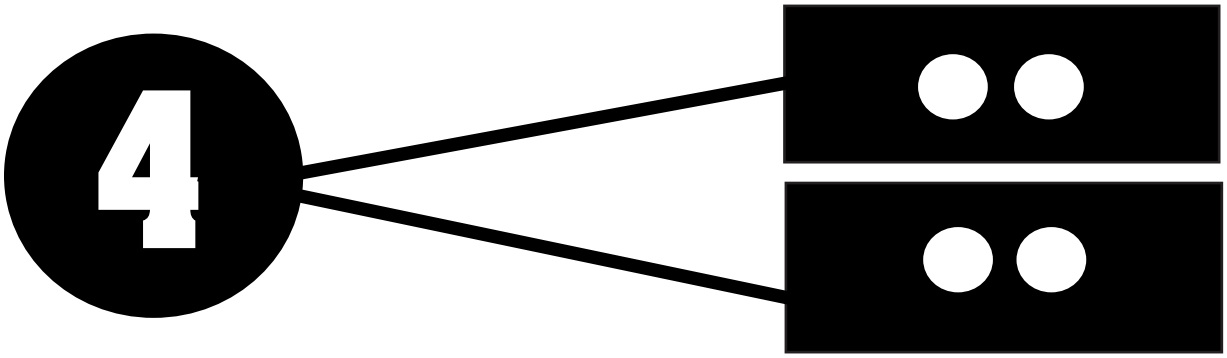
Division Strategies:

PARTITION

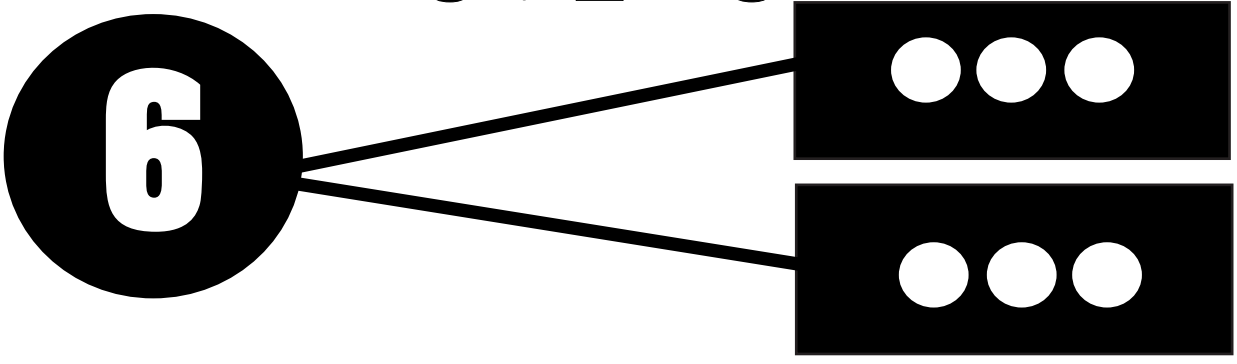
$2 \div 2 = 1$



$4 \div 2 = 2$



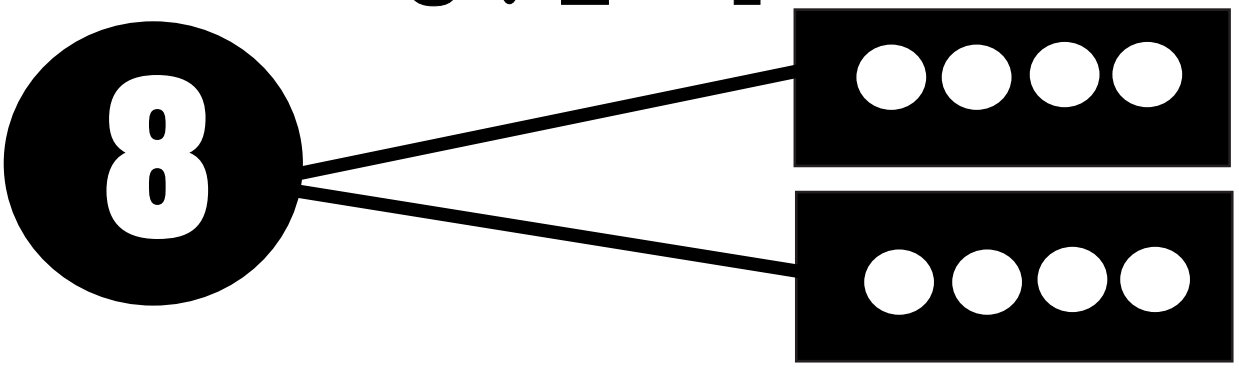
$6 \div 2 = 3$



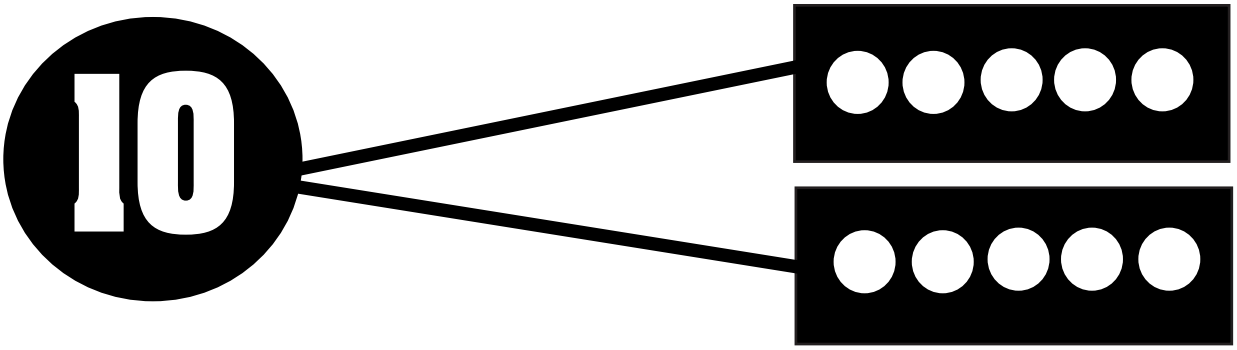
Division Strategies:

PARTITION

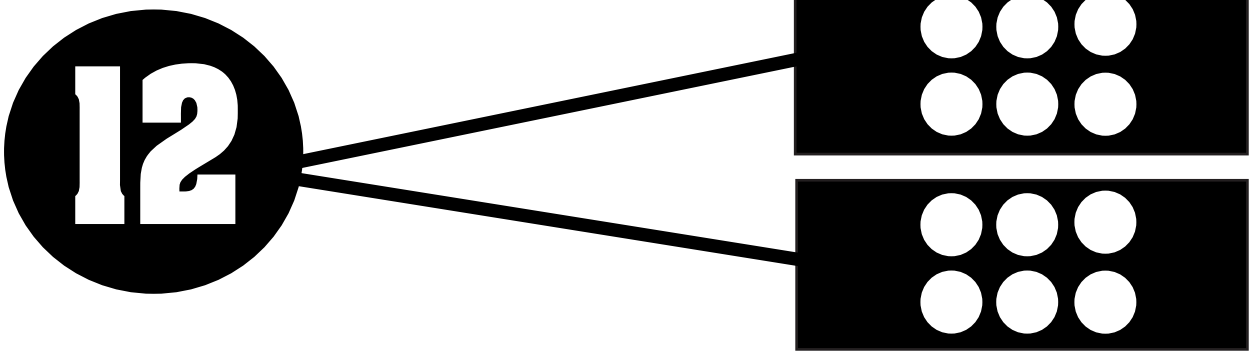
$8 \div 2 = 4$



$10 \div 2 = 5$



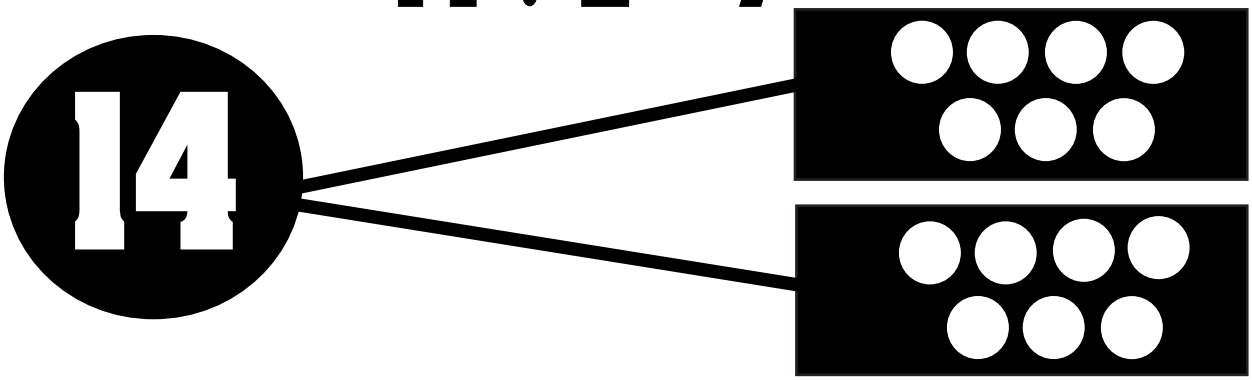
$12 \div 2 = 6$



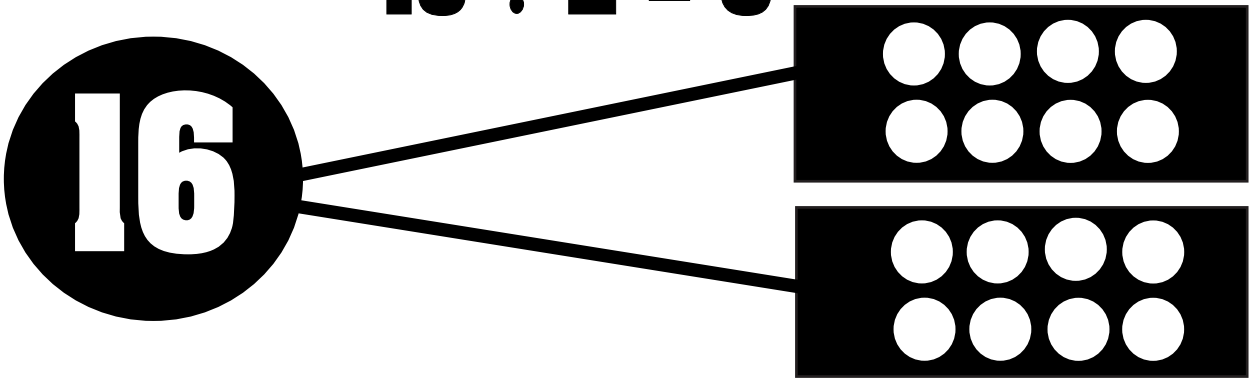
Division Strategies:

PARTITION

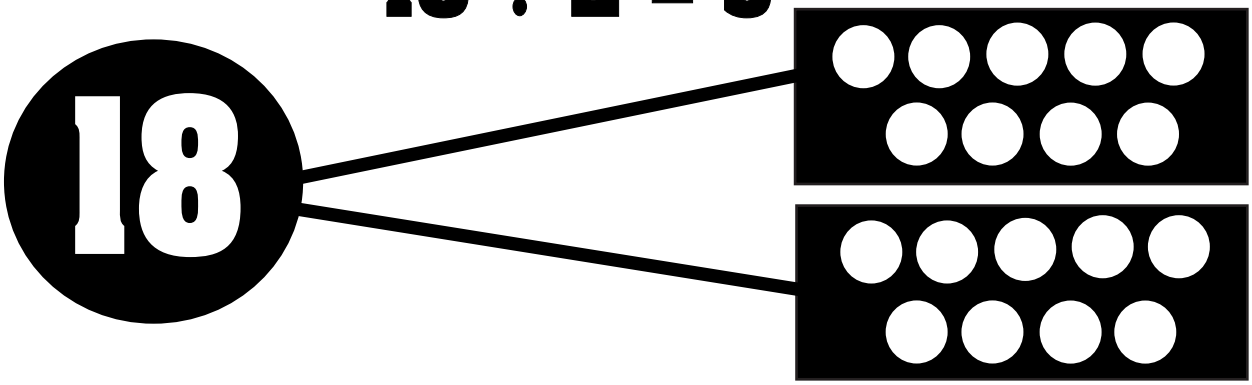
$14 \div 2 = 7$



$16 \div 2 = 8$



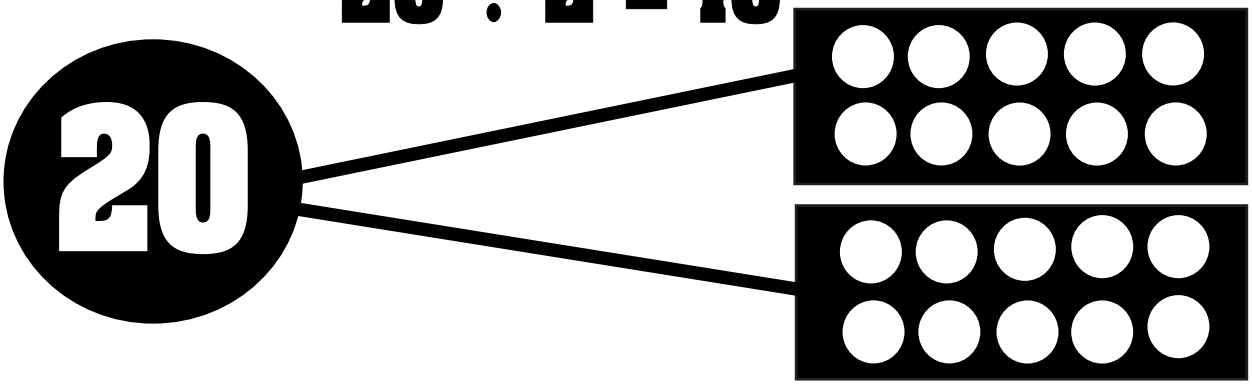
$18 \div 2 = 9$



Division Strategies:

PARTITION

$20 \div 2 = 10$



FREE CHOICE

FREE CHOICE

Division Strategies:

RELATED FACT

14 ÷ 2 = 7

think

2 x 7 = 14

2 ÷ 2 = 1

think

2 x 1 = 2

10 ÷ 2 = 5

think

2 x 5 = 10

18 ÷ 2 = 9

think

2 x 9 = 18

Division Strategies:

RELATED FACT

$6 \div 2 = 3$

think

$2 \times 3 = 6$

$20 \div 2 = 10$

think

$2 \times 10 = 20$

$4 \div 2 = 2$

think

$2 \times 2 = 4$

$12 \div 2 = 6$

think

$2 \times 6 = 12$

Division Strategies:

RELATED FACT

8 ÷ 2 = 4

think

2 x 4 = 8

16 ÷ 2 = 8

think

2 x 8 = 16

__ ÷ __ = __

think

__ x __ = __

__ ÷ __ = __

think

__ x __ = __

Division Strategies:

REPEATED SUBTRACTION

$$12 \div 2 = ?$$

$$12 - 2 = 10$$

$$10 - 2 = 8$$

$$8 - 2 = 6$$

$$6 - 2 = 4$$

$$4 - 2 = 2$$

$$2 - 2 = 0$$

$$12 \div 2 = \boxed{6}$$

Division Strategies:
REPEATED SUBTRACTION

$$12 \div 2 = ?$$

$$12 - \underline{2} = 10$$
$$\underline{10} - 2 = 8$$
$$\underline{8} - 2 = 6$$
$$6 - \underline{2} = 4$$
$$4 - \underline{2} = 2$$
$$\underline{2} - 2 = 0$$

$$12 \div 2 = \boxed{6}$$

Division Strategies:

REPEATED SUBTRACTION

14 ÷ 2 = ?

14 - 2 = 12
12 - 2 = 10
10 - 2 = 8
8 - 2 = 6
6 - 2 = 4
4 - 2 = 2
2 - 2 = 0

14 ÷ 2 = 7

Division Strategies:
REPEATED SUBTRACTION

10 ÷ 2 = ?

10 - 2 = 8
8 - 2 = 6
6 - 2 = 4
4 - 2 = 2
2 - 2 = 0

10 ÷ 2 = 5

Division Strategies:

REPEATED SUBTRACTION

$16 \div 2 = ?$

$16 - \underline{2} = 14$

$14 - \underline{2} = 12$

$12 - \underline{2} = 10$

$\underline{10} - 2 = 8$

$\underline{8} - 2 = 6$

$6 - \underline{2} = 4$

$4 - \underline{2} = 2$

$\underline{2} - 2 = 0$

$16 \div 2 = \boxed{8}$

Division Strategies:

REPEATED SUBTRACTION

$$20 \div 2 = ?$$

$$20 - 2 = 18$$
$$18 - 2 = 16$$
$$16 - 2 = 14$$
$$14 - 2 = 12$$
$$12 - 2 = 10$$
$$10 - 2 = 8$$
$$8 - 2 = 6$$
$$6 - 2 = 4$$
$$4 - 2 = 2$$
$$2 - 2 = 0$$

$$20 \div 2 = \boxed{10}$$

Modeling Division:
SKIP COUNTING

DRAW ON A NUMBER LINE

2 4 6 8 10 12 14 16 18 20

2 4 6 8 10 12 14 16 18 20

FILL IN THE MISSING NUMBERS

2	4	6	8	10	12	14	16	18	20

2	4	6	8	10	12	14	16	18	20

Modeling Division:
SKIP COUNTING

FILL IN THE MISSING NUMBERS

2	4	6	8	10	12	14	16	18	20

FILL IN THE MISSING NUMBERS

2	4	6	8	10	12	14	16	18	20

FILL IN THE MISSING NUMBERS

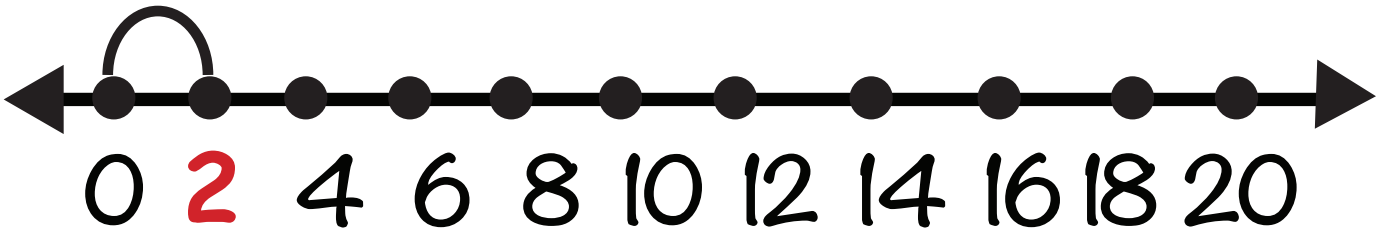
2	4	6	8	10	12	14	16	18	20

FILL IN THE MISSING NUMBERS

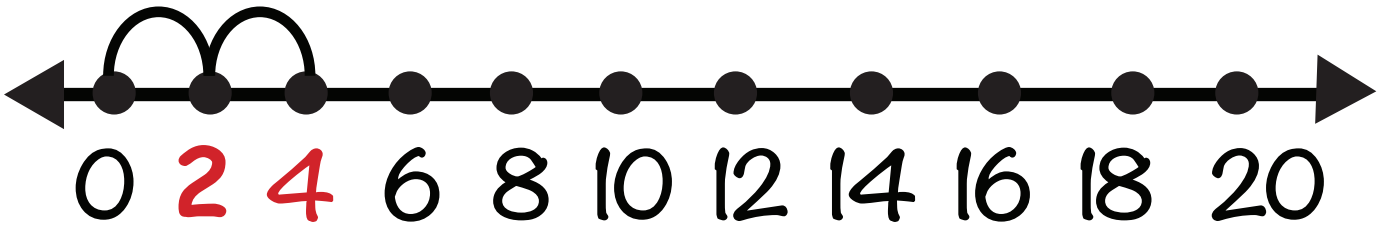
2	4	6	8	10	12	14	16	18	20

Division Strategies:
SKIP COUNTING

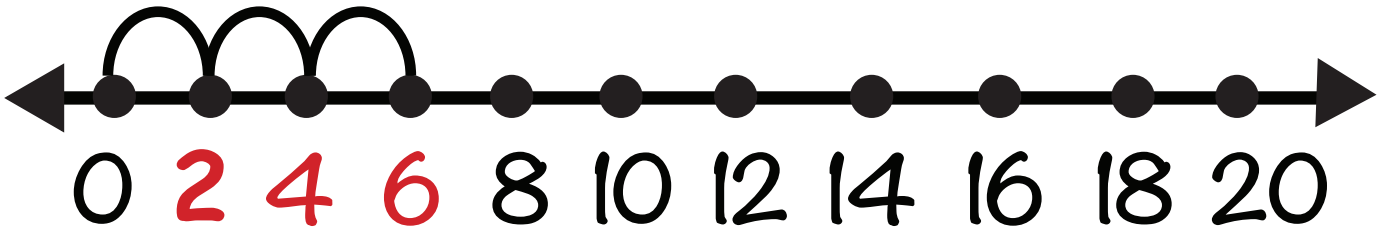
FILL IN THE MISSING NUMBERS. MODEL 2 ÷ 2 ON THE NUMBER LINE.



FILL IN THE MISSING NUMBERS. MODEL 4 ÷ 2 ON THE NUMBER LINE.

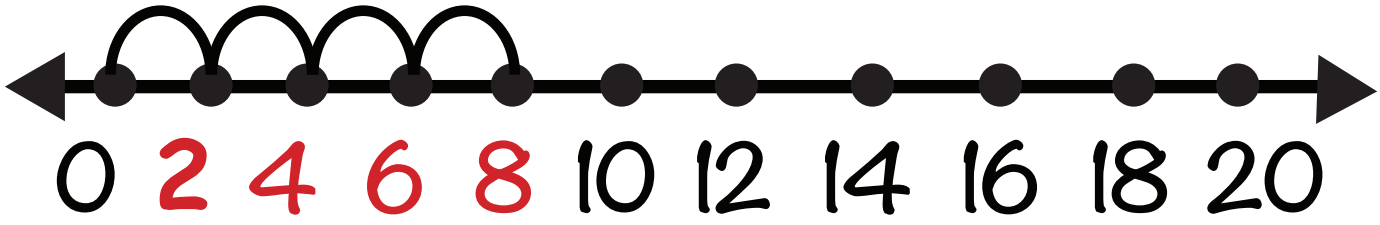


FILL IN THE MISSING NUMBERS. MODEL 6 ÷ 2 ON THE NUMBER LINE.

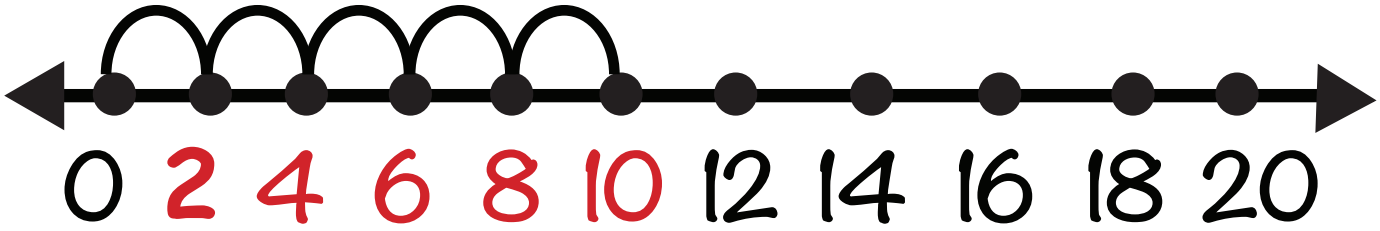


Division Strategies:
SKIP COUNTING

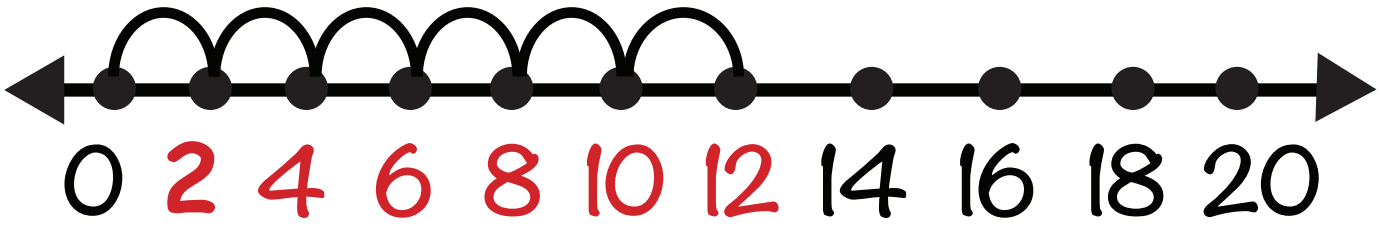
FILL IN THE MISSING NUMBERS. MODEL 8 ÷ 2 ON THE NUMBER LINE.



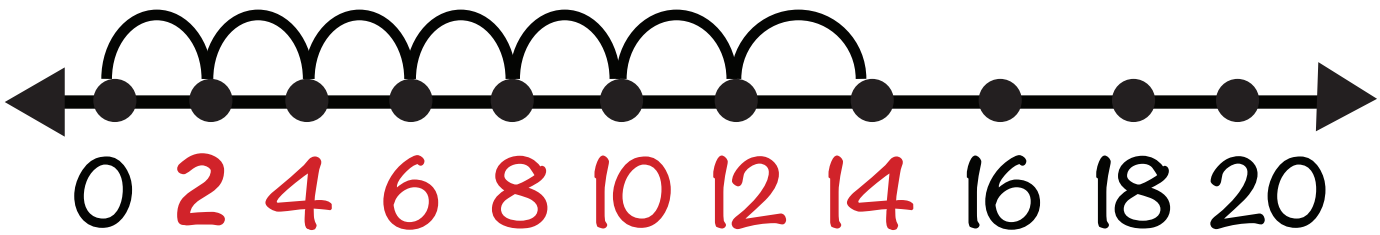
FILL IN THE MISSING NUMBERS. MODEL 10 ÷ 2 ON THE NUMBER LINE.



FILL IN THE MISSING NUMBERS. MODEL 12 ÷ 2 ON THE NUMBER LINE.

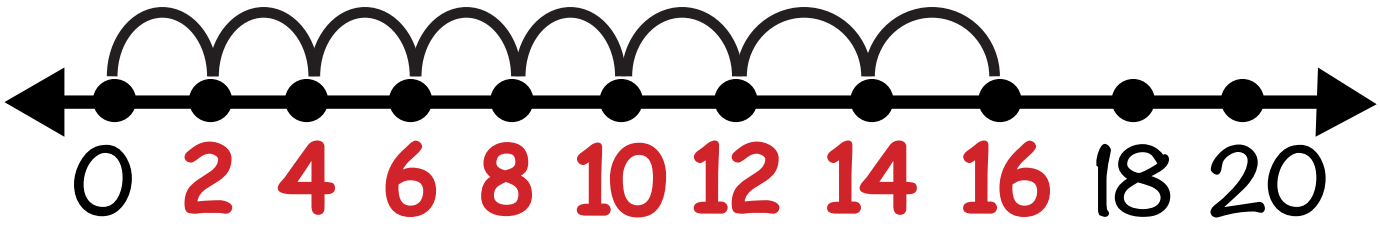


FILL IN THE MISSING NUMBERS. MODEL 14 ÷ 2 ON THE NUMBER LINE.

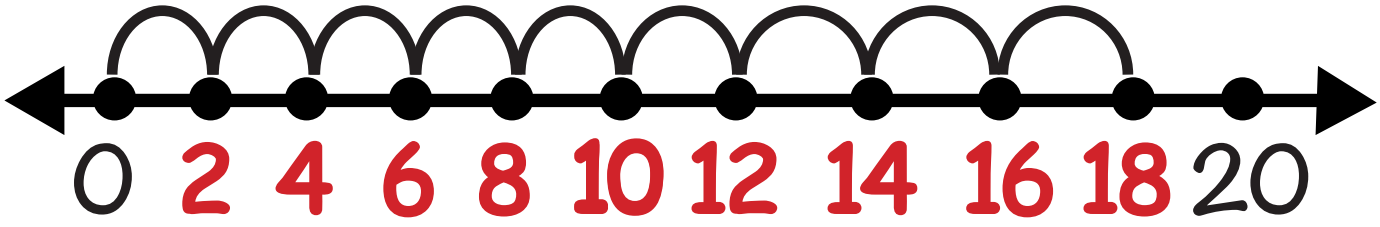


Division Strategies:
SKIP COUNTING

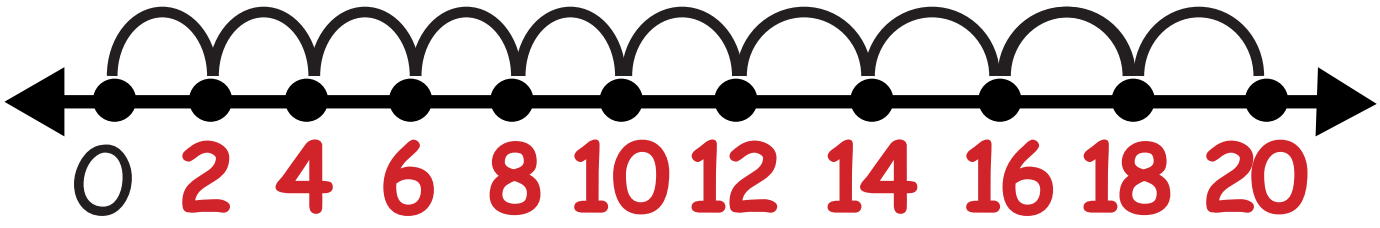
FILL IN THE MISSING NUMBERS. MODEL 16 ÷ 2 ON THE NUMBER LINE.



FILL IN THE MISSING NUMBERS. MODEL 18 ÷ 2 ON THE NUMBER LINE.



FILL IN THE MISSING NUMBERS. MODEL 20 ÷ 2 ON THE NUMBER LINE.



Division Strategies:

NUMBER LINES

There are 12 cookies and you put 2 in a bag. How many bags do you have?

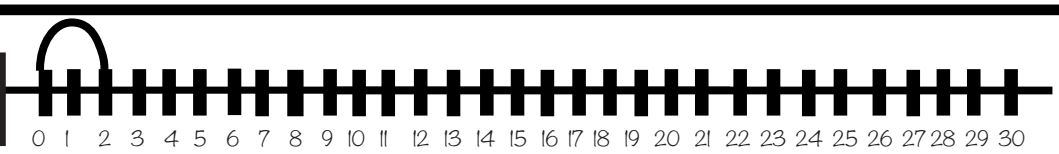
12 ÷ 2 = 12

How many jumps until you get zero?

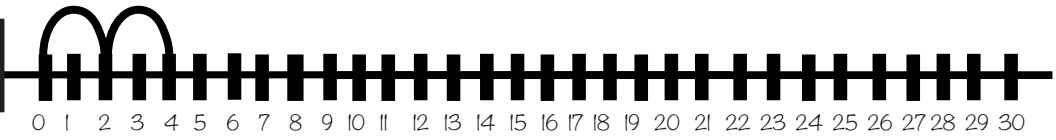
THE FIRST NUMBER IS HOW MANY COOKIES (DIVIDEND). THE SECOND NUMBER IS HOW MANY ARE IN A BAG (DIVISOR). THE QUESTION IS HOW MANY BAGS DO YOU NEED (QUOTIENT)?

SOLVE THE PROBLEM ON THE NUMBER LINE.
How many jumps until you get zero?

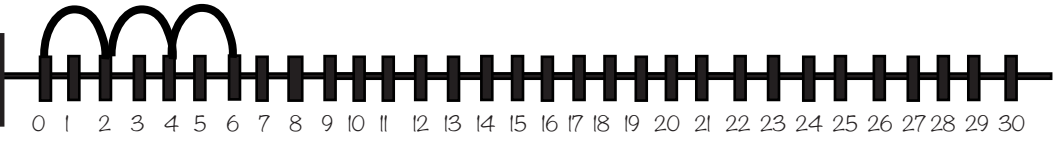
2 ÷ 2



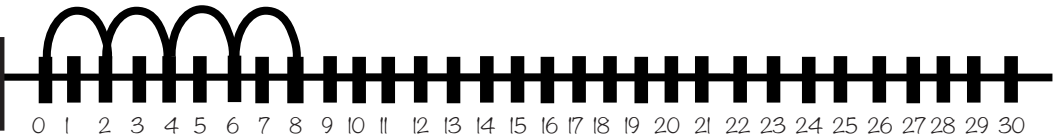
4 ÷ 2



6 ÷ 2



8 ÷ 2



Division Strategies:

NUMBER LINES

10 ÷ 2

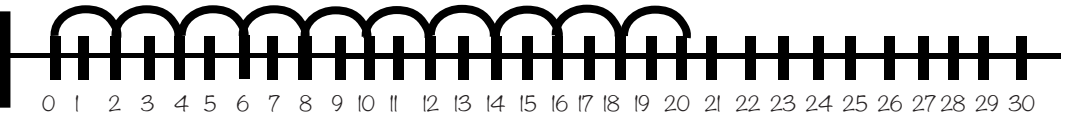
12 ÷ 2

14 ÷ 2

16 ÷ 2

18 ÷ 2

20 ÷ 2



Division Strategies:

SKIP COUNTING CHART

2	12
4	14
6	16
8	18
10	20

Division Vocabulary

dividend **divisor** **quotient**

$$12 \div 2 = 6$$

quotient

divisor $2\overline{)12}$ 6 **dividend**

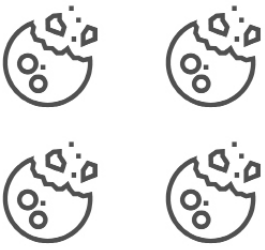
dividend $\frac{12}{2} = 6$ **quotient**

divisor

Array Flashcards

USE THE MODEL TO SOLVE

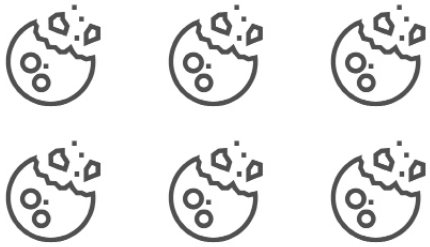
$2 \div 2 = \underline{1}$



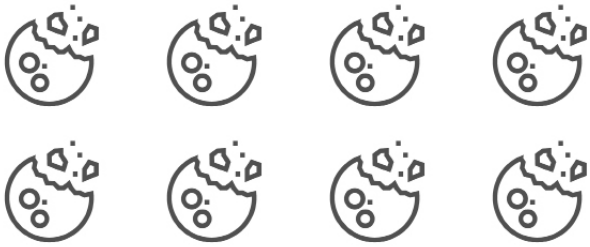
$4 \div 2 = \underline{2}$

Array Flashcards

USE THE MODEL TO SOLVE



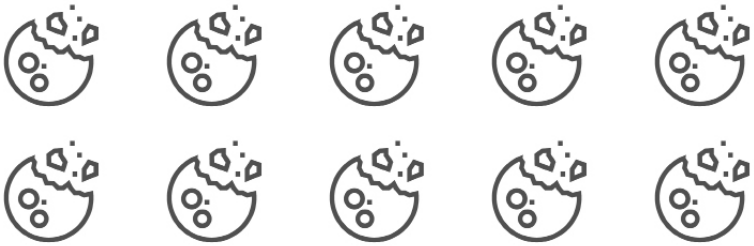
$6 \div 2 = \underline{3}$



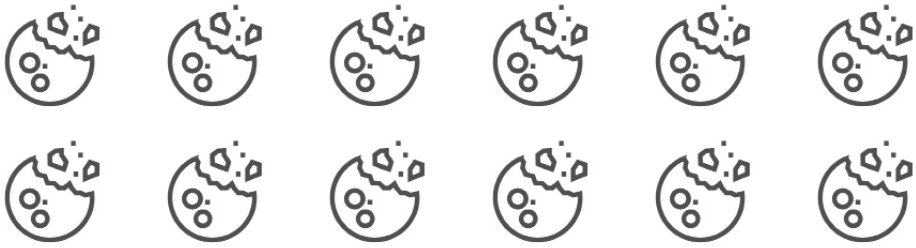
$8 \div 2 = \underline{4}$

Array Flashcards

USE THE MODEL TO SOLVE



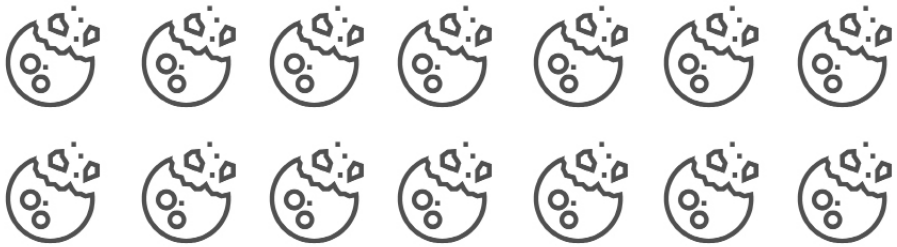
$10 \div 2 = \underline{5}$



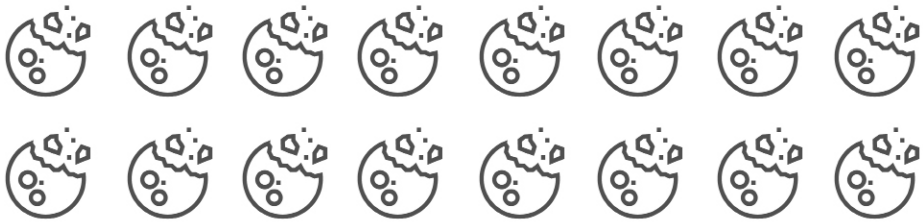
$12 \div 2 = \underline{6}$

Array Flashcards

USE THE MODEL TO SOLVE



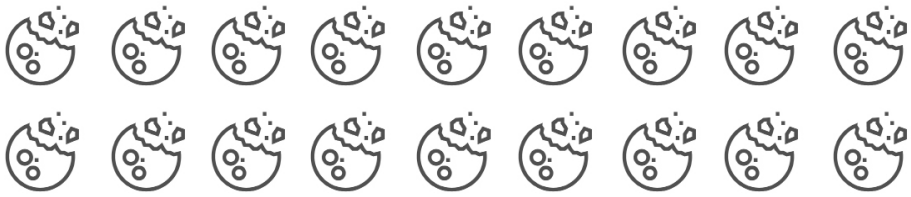
$14 \div 2 = \underline{7}$



$16 \div 2 = \underline{8}$

Array Flashcards

USE THE MODEL TO SOLVE



18 ÷ 2 = 9

20 ÷ 2 = 10

Array Flashcards

WRITE AN EQUATION THAT MATCHES THE ARRAY.

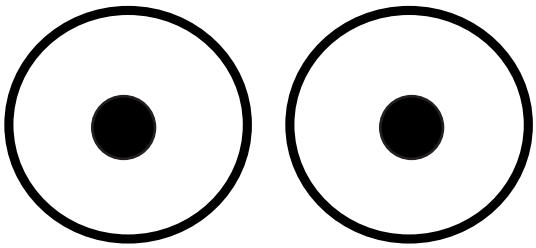
FREE CHOICE

FREE CHOICE

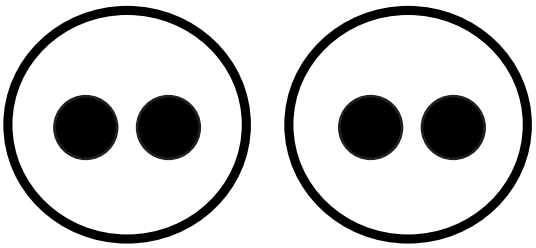
Equal Group Flashcards

MAKE YOUR OWN EQUAL GROUP FLASHCARDS. DRAW EQUAL GROUPS TO MODEL THE PROBLEM.

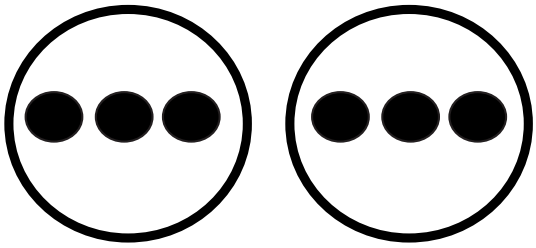
$2 \div 2 = 1$



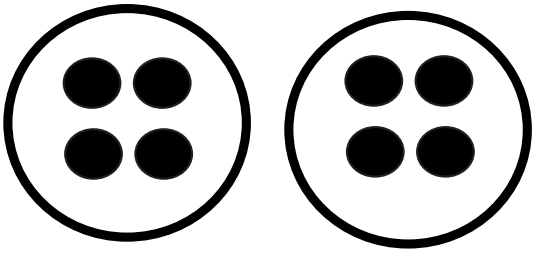
$4 \div 2 = 2$



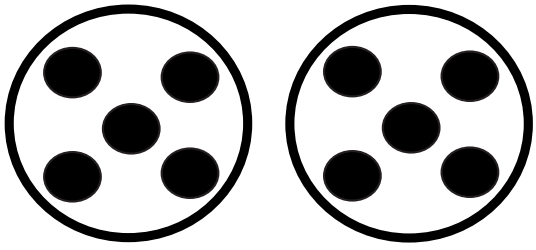
$6 \div 2 = 3$



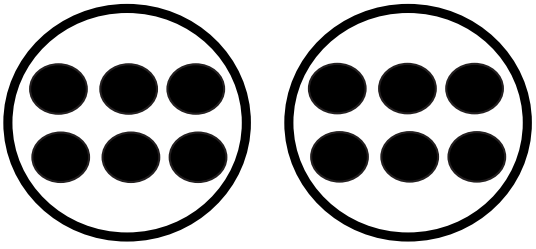
$8 \div 2 = 4$



$10 \div 2 = 5$



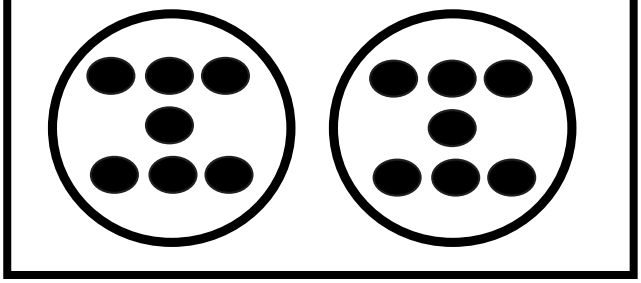
$12 \div 2 = 6$



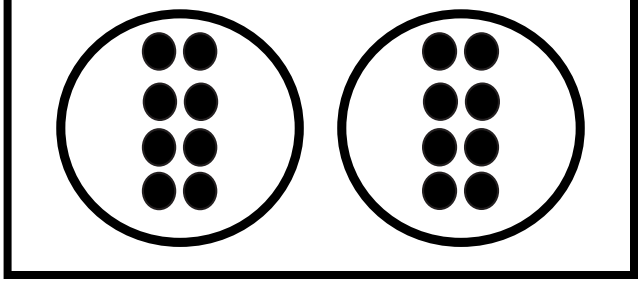
Equal Group Flashcards

MAKE YOUR OWN EQUAL GROUP FLASHCARDS. DRAW EQUAL GROUPS TO MODEL THE PROBLEM.

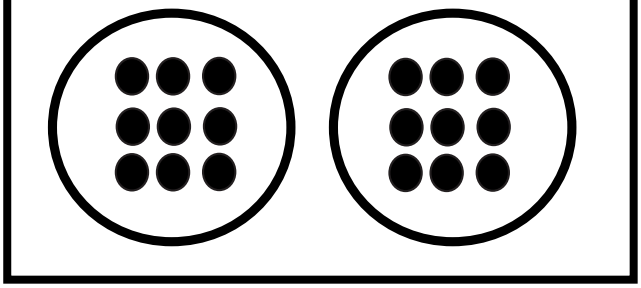
14 ÷ 2 = 7



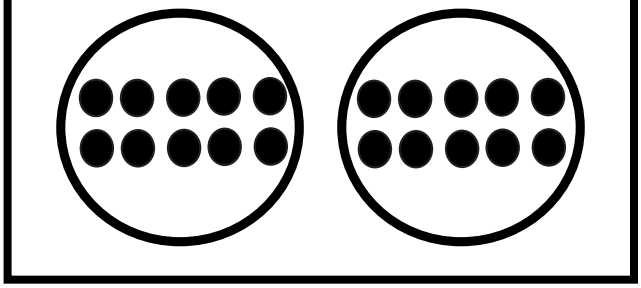
16 ÷ 2 = 8



18 ÷ 2 = 9



20 ÷ 2 = 10



Regular Flashcards

$0 \div 2$	$2 \div 2$
$4 \div 2$	$6 \div 2$
$8 \div 2$	$10 \div 2$

Regular Flashcards

12 ÷ 2	14 ÷ 2
16 ÷ 2	18 ÷ 2
20 ÷ 2	

CALLING CARDS DIVIDING BY 2

1	2	3	4	5
6	7	8	9	10

Dividing by 2
4 IN A ROW

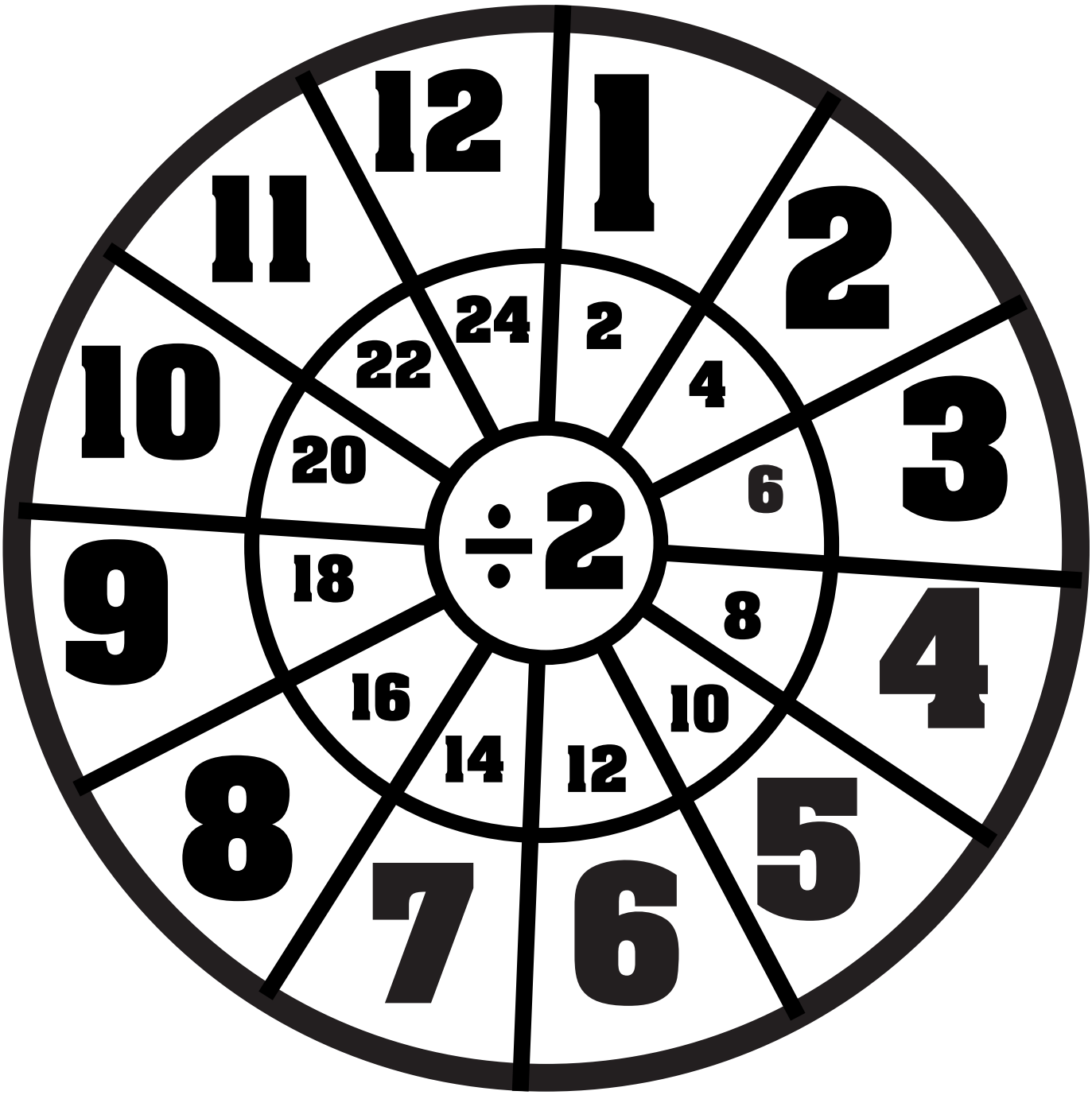
CHECK YOUR ANSWERS USING YOUR BOOKMARK.

20÷2=?	16÷2=?	12÷2=?	6÷2=?	2÷2=?	10÷2=?
8÷2=?	18÷2=?	4÷2=?	4÷2=?	14÷2=?	2÷2=?
20÷2=?	12÷2=?	6÷2=?	10÷2=?	18÷2=?	4÷2=?
16÷2=?	2÷2=?	8÷2=?	14÷2=?	2÷2=?	4÷2=?
12÷2=?	6÷2=?	20÷2=?	18÷2=?	16÷2=?	8÷2=?
10÷2=?	4÷2=?	14÷2=?	8÷2=?	18÷2=?	2÷2=?
16÷2=?	18÷2=?	2÷2=?	6÷2=?	12÷2=?	10÷2=?

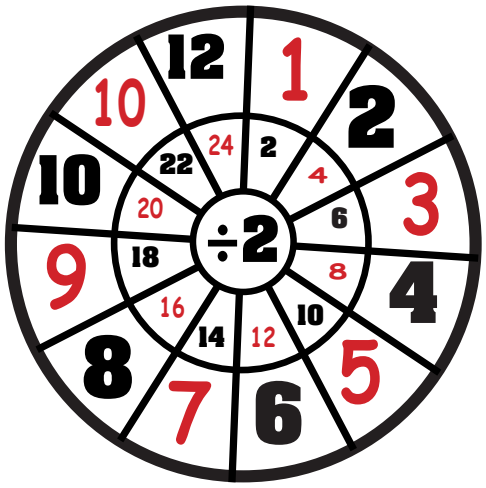
Instructions:

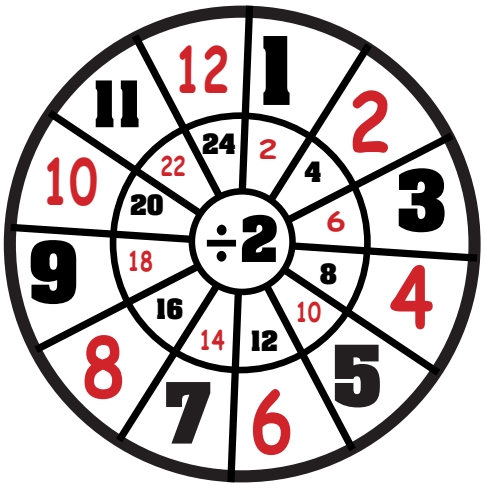
1. Each person pulls a card. Whoever has the largest number starts.
2. Take turns pulling a card and cover the expression that matches that quotient.
3. The first player to get 4 in a row wins!
4. Play again!

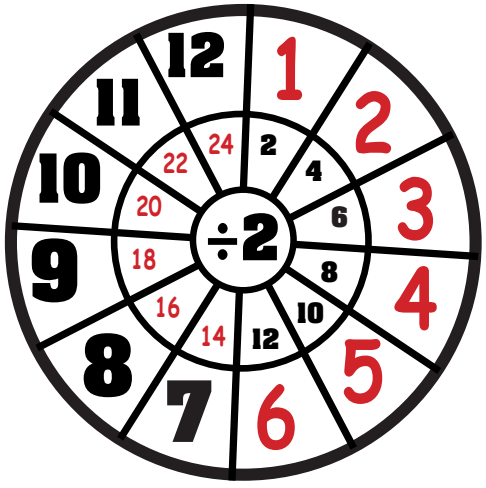
DIVISION WHEELS

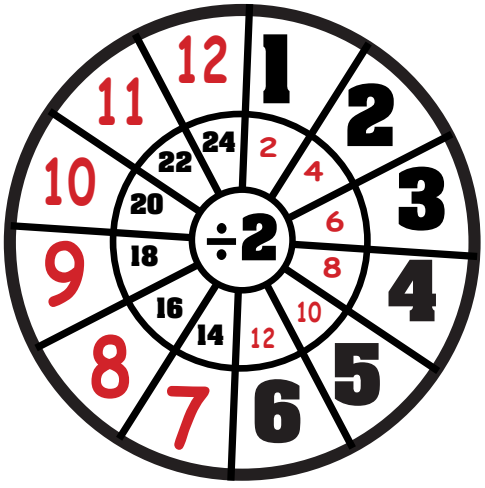


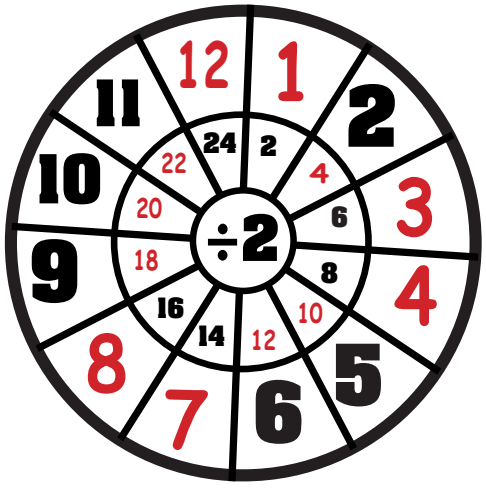
DIVISION WHEELS

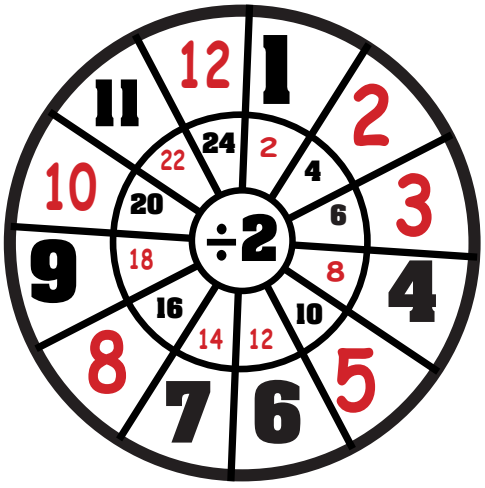












PICTURE FACT FAMILY

$2 \times 1 = 2$

$1 \times 2 = 2$

$2 \div 1 = 2$

$2 \div 2 = 1$

$2 \times 2 = 4$

$2 \times 2 = 4$

$4 \div 2 = 2$

$4 \div 2 = 2$

$2 \times 3 = 6$

$3 \times 2 = 6$

$6 \div 2 = 3$

$6 \div 3 = 2$

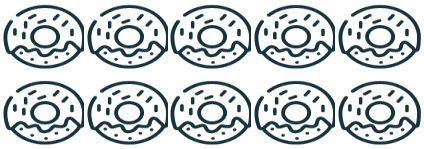
$2 \times 4 = 8$

$4 \times 2 = 8$

$8 \div 2 = 4$

$8 \div 4 = 2$

PICTURE FACT FAMILY

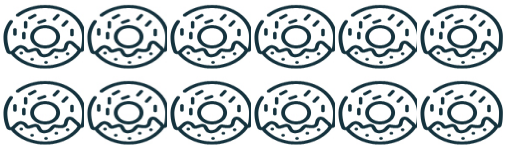


$2 \times 5 = 10$

$5 \times 2 = 10$

$10 \div 2 = 5$

$10 \div 5 = 2$



$2 \times 6 = 12$

$6 \times 2 = 12$

$12 \div 2 = 6$

$12 \div 6 = 2$

$2 \times 7 = 14$

$7 \times 2 = 14$

$14 \div 2 = 7$

$14 \div 7 = 2$

$2 \times 8 = 16$

$8 \times 2 = 16$

$16 \div 2 = 8$

$16 \div 8 = 2$

PICTURE FACT FAMILY

$2 \times 9 = 18$

$9 \times 2 = 18$

$18 \div 2 = 9$

$18 \div 9 = 2$

MAKE YOUR OWN

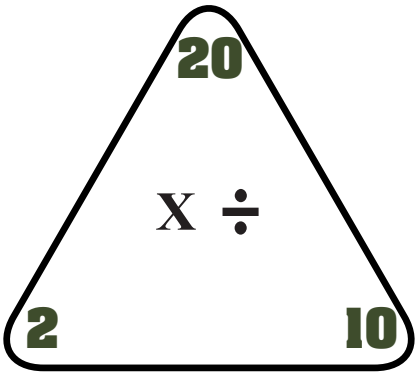
$\_\_ \times \_\_ = \_\_$

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

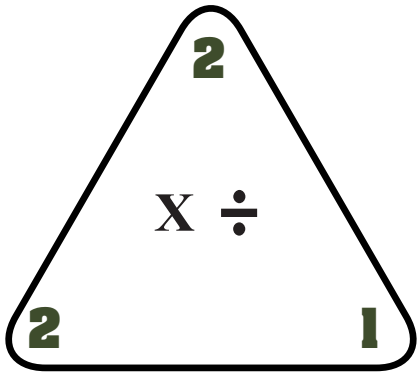
$\_\_ \div \_\_ = \_\_$

$\_\_ \div \_\_ = \_\_$

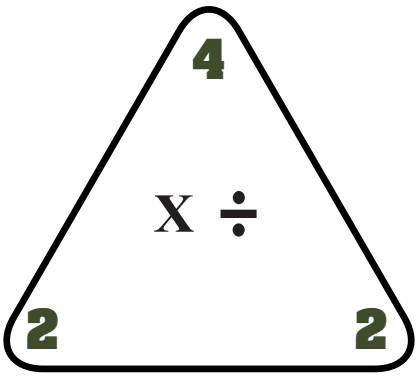
TRIANGLE FACT FAMILY



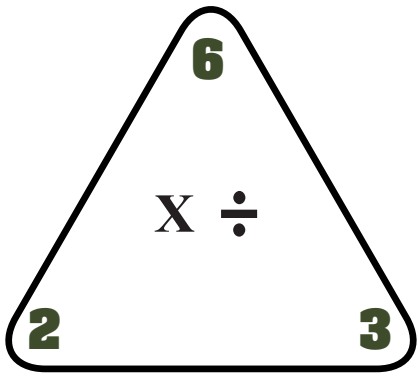
2	x	10	=	20
10	x	2	=	20
20	÷	10	=	2
20	÷	2	=	10



2	x	1	=	2
1	x	2	=	2
2	÷	1	=	2
2	÷	2	=	1

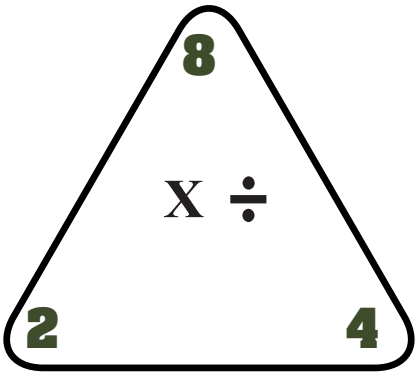


2	x	2	=	4
2	x	2	=	4
4	÷	2	=	2
4	÷	2	=	2

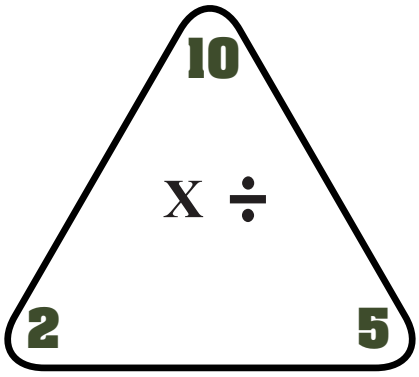


2	x	3	=	6
3	x	2	=	6
6	÷	3	=	2
6	÷	2	=	3

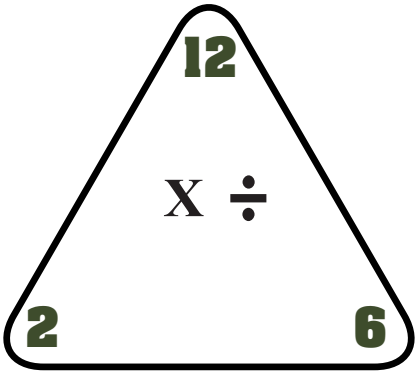
TRIANGLE FACT FAMILY



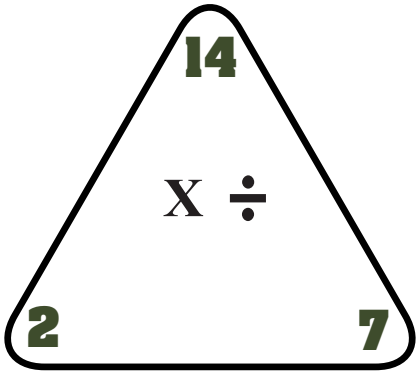
2	x	4	=	8
4	x	2	=	8
8	÷	4	=	2
8	÷	2	=	4



2	x	5	=	10
5	x	2	=	10
10	÷	5	=	2
10	÷	2	=	5

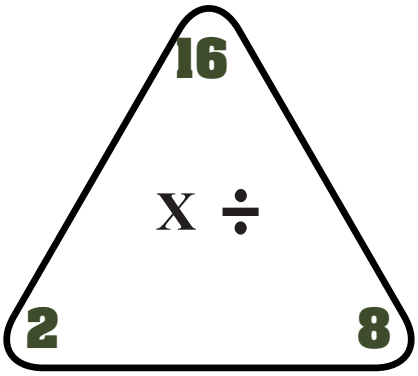


2	x	6	=	12
6	x	2	=	12
12	÷	6	=	2
12	÷	2	=	6

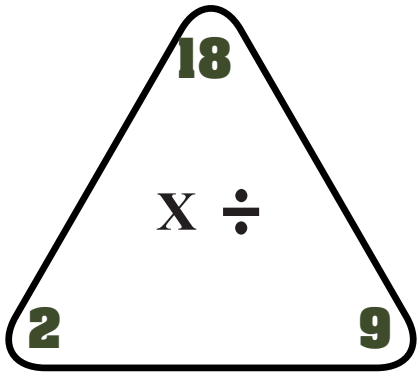


2	x	7	=	14
7	x	2	=	14
14	÷	7	=	2
14	÷	2	=	7

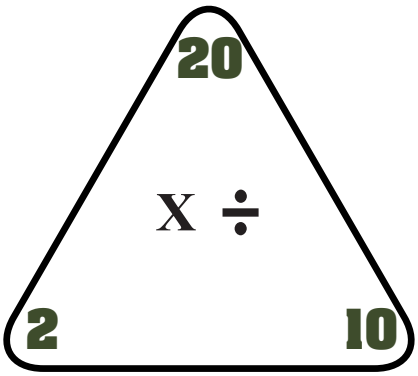
TRIANGLE FACT FAMILY



2	x	8	=	16
8	x	2	=	16
16	÷	2	=	8
16	÷	8	=	2

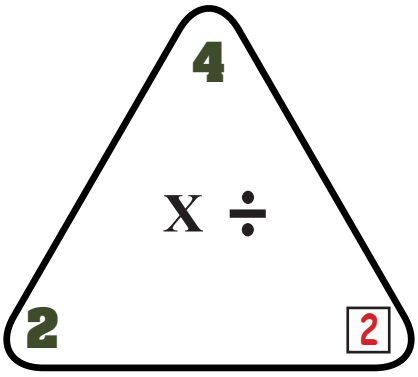


2	x	9	=	18
9	x	2	=	18
18	÷	9	=	2
18	÷	2	=	9



2	x	10	=	20
10	x	2	=	20
20	÷	10	=	2
20	÷	2	=	10

TRIANGLE FACT FAMILY

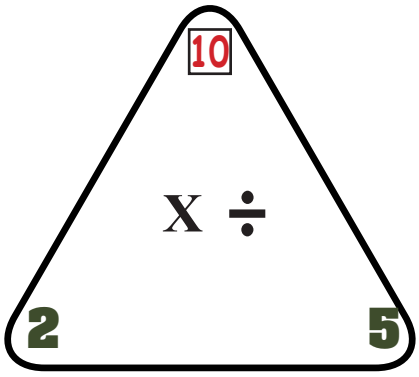


$2 \times 2 = 4$

$2 \times 2 = 4$

$4 \div 2 = 2$

$4 \div 2 = 2$

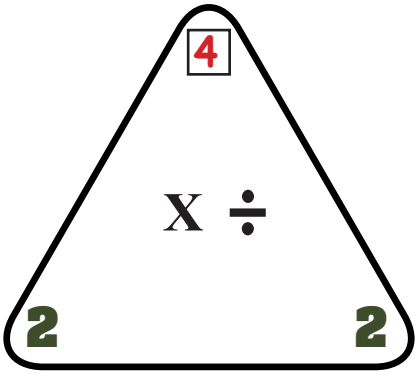


$2 \times 5 = 10$

$5 \times 2 = 10$

$10 \div 5 = 2$

$10 \div 2 = 5$

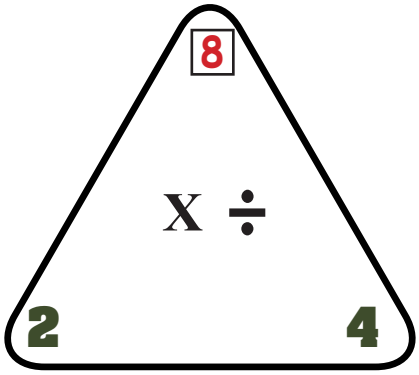


$2 \times 2 = 4$

$2 \times 2 = 4$

$4 \div 2 = 2$

$4 \div 2 = 2$



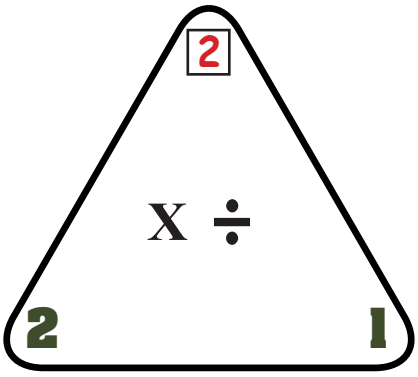
$2 \times 4 = 8$

$4 \times 2 = 8$

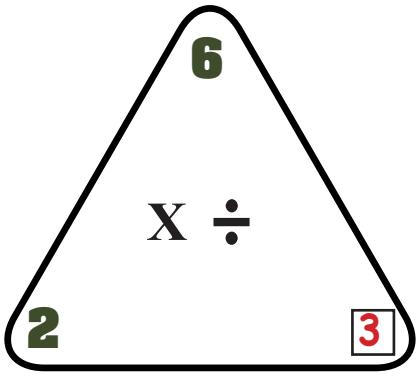
$8 \div 4 = 2$

$8 \div 2 = 4$

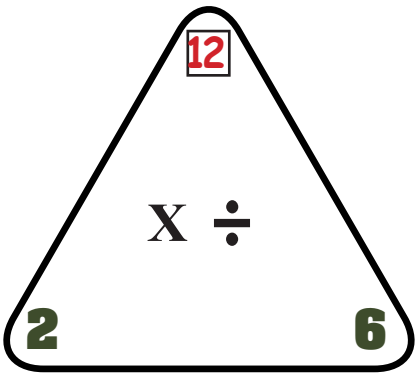
TRIANGLE FACT FAMILY



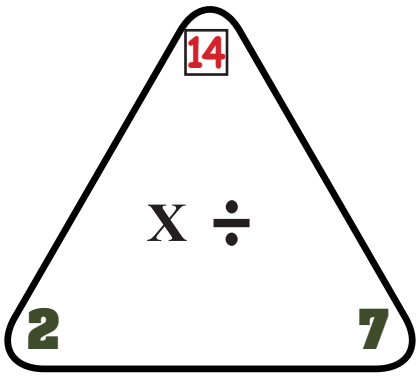
2 x 1 = 2
1 x 2 = 2
2 ÷ 1 = 2
2 ÷ 2 = 1



2 x 3 = 6
3 x 2 = 6
6 ÷ 3 = 2
6 ÷ 2 = 3



2 x 6 = 12
6 x 2 = 12
12 ÷ 6 = 2
12 ÷ 2 = 6



2 x 7 = 14
7 x 2 = 14
14 ÷ 7 = 2
14 ÷ 2 = 7

WORD PROBLEM

MODEL YOUR THINKING AND SOLVE THE PROBLEM.

THE BAKERY HAD 14 DONUTS IN 2 ROWS. THEY HAD THE SAME AMOUNT IN EACH ROW. HOW MANY WERE IN EACH ROW?

14 ÷ 2 = 7

THE BAKERY HAD 10 DONUTS. THEY PUT 2 IN A ROW. HOW MANY ROWS DID THEY MAKE?

10 ÷ 2 = 5

THE BAKERY MADE 20 MUFFINS. THEY PACKED 2 IN A BOX. HOW MANY BOXES DID THEY USE?

20 ÷ 2 = 10

THE BAKERY MADE 8 HAND PIES. THEY USED 2 BOXES. THEY PUT THE SAME AMOUNT OF PIES IN EACH BOX. HOW MANY HAND PIES DID THEY PUT IN EACH BOX?

8 ÷ 2 = 4

QUIZ

Follow the directions in each box. Choose an equation to represent each problem.

I CAN SKIP COUNT TO DIVIDE BY 2'S!	I CAN USE EQUAL GROUPS TO DIVIDE BY 2'S!

I CAN USE ARRAYS TO MODEL DIVIDING BY 2'S!	I CAN MODEL DIVIDING BY 2'S ON THE NUMBER LINE!

I CAN USE REPEATED SUBTRACTION TO DIVIDE BY 2'S.	MY STRATEGY FOR THINKING ABOUT DIVIDING BY 2'S IS....

GREAT MATH WORK!

CERTIFICATE

_____

HAS SUCCESSFULLY PRACTICED DIVIDING BY 2'S!

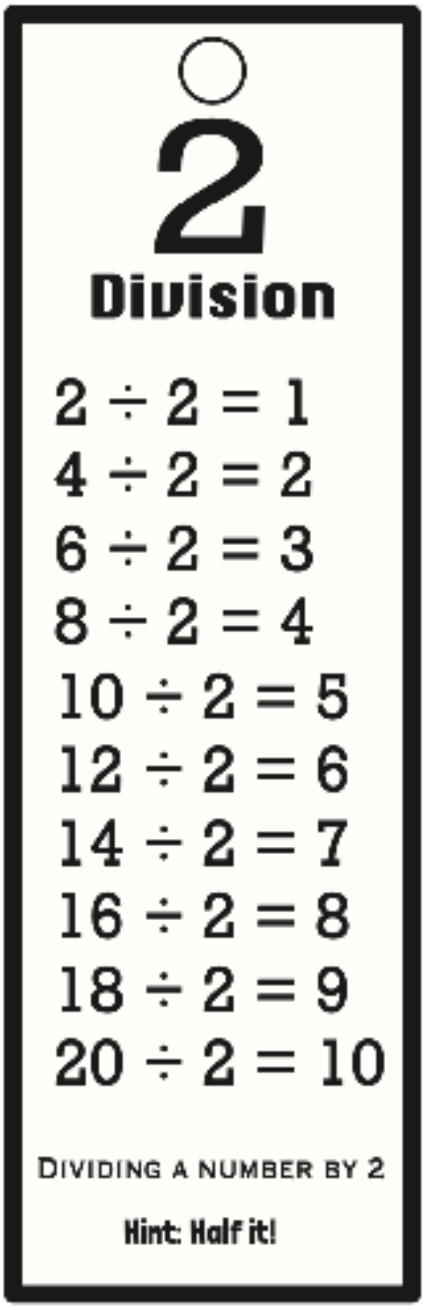
GREAT JOB!

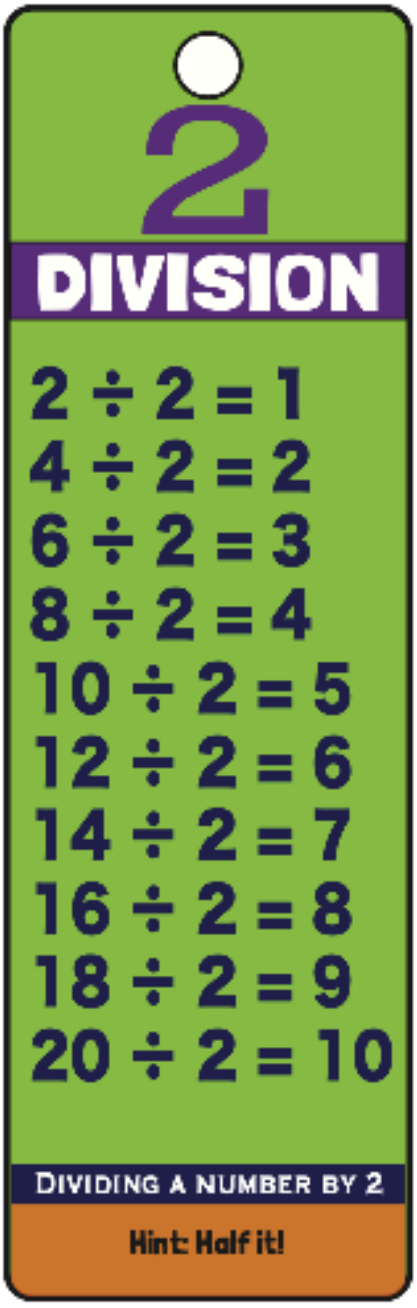
TEACHER: _____ **DATE:** _____

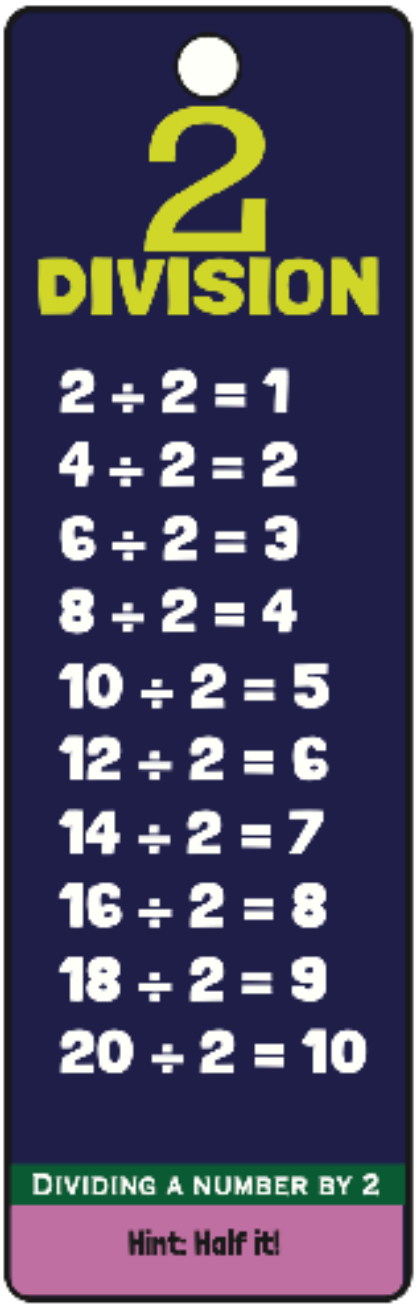
Looking at the 2's

2 ÷ 2 = 1	12 ÷ 2= 6
4 ÷ 2 = 2	14 ÷ 2 = 7
6 ÷ 2 = 3	16 ÷ 2 = 8
8 ÷ 2 = 4	18 ÷ 2 = 9
10 ÷ 2 = 5	20 ÷ 2 = 10

Bookmarks


2
Division
2 ÷ 2 = 1
4 ÷ 2 = 2
6 ÷ 2 = 3
8 ÷ 2 = 4
10 ÷ 2 = 5
12 ÷ 2 = 6
14 ÷ 2 = 7
16 ÷ 2 = 8
18 ÷ 2 = 9
20 ÷ 2 = 10
DIVIDING A NUMBER BY 2
Hint: Half it!


2
DIVISION
2 ÷ 2 = 1
4 ÷ 2 = 2
6 ÷ 2 = 3
8 ÷ 2 = 4
10 ÷ 2 = 5
12 ÷ 2 = 6
14 ÷ 2 = 7
16 ÷ 2 = 8
18 ÷ 2 = 9
20 ÷ 2 = 10
DIVIDING A NUMBER BY 2
Hint: Half it!


2
DIVISION
2 ÷ 2 = 1
4 ÷ 2 = 2
6 ÷ 2 = 3
8 ÷ 2 = 4
10 ÷ 2 = 5
12 ÷ 2 = 6
14 ÷ 2 = 7
16 ÷ 2 = 8
18 ÷ 2 = 9
20 ÷ 2 = 10
DIVIDING A NUMBER BY 2
Hint: Half it!