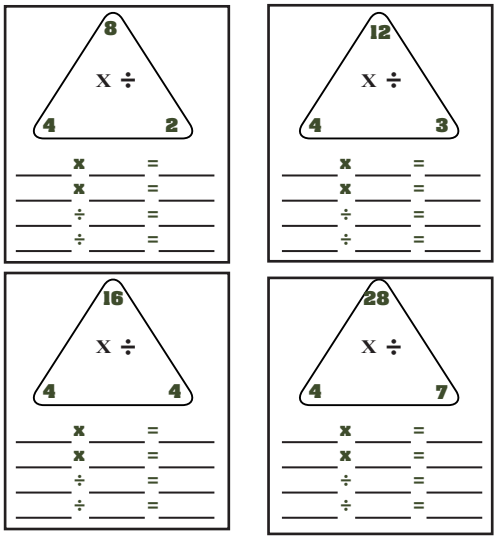
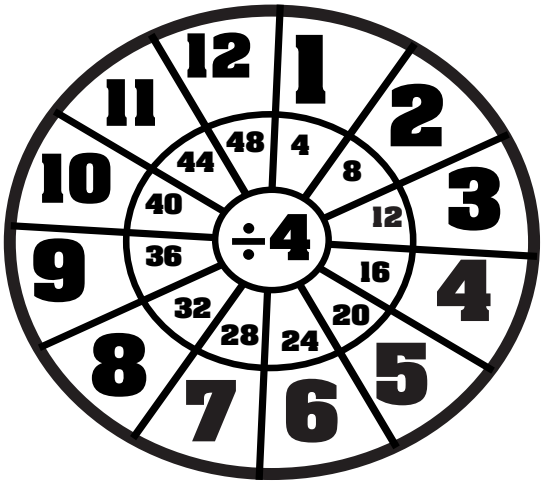
DIVIDING by 4

WORK BOOKLET ANSWER KEY

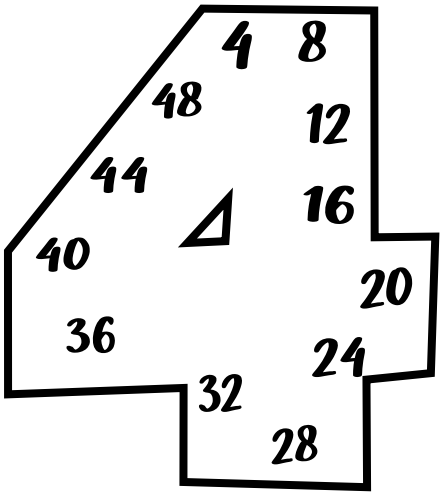
TRIANGLE FACT FAMILY



DIVISION WHEELS

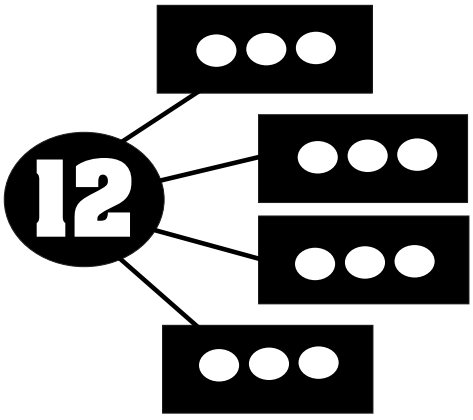


MULTIPLES OF 4



Division Strategies:

PARTITION

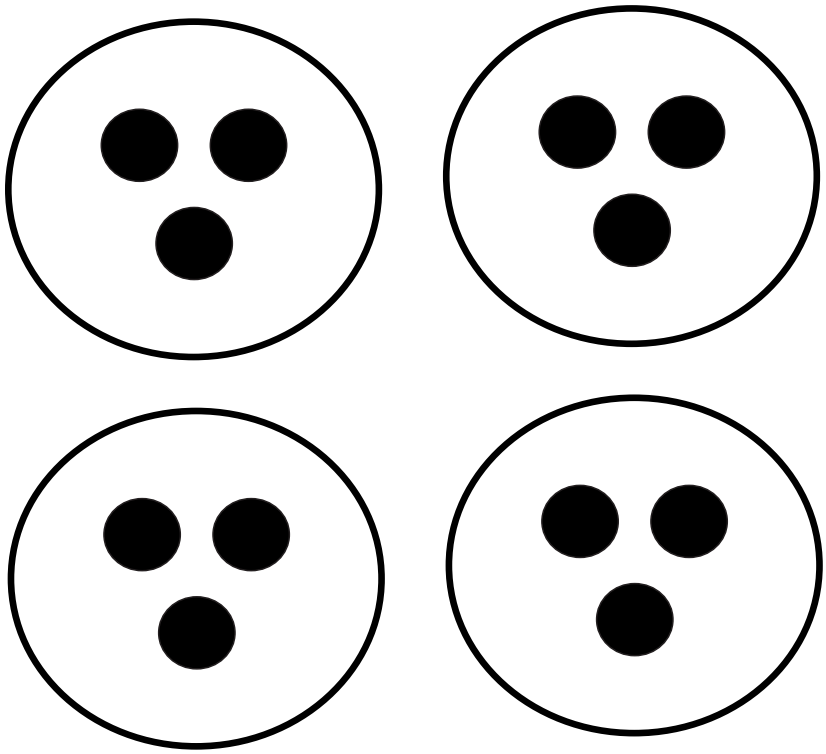


12 ÷ 4 = 3

STRATEGY POSTER

When dividing by 4, think multiplication! 4 x ? =

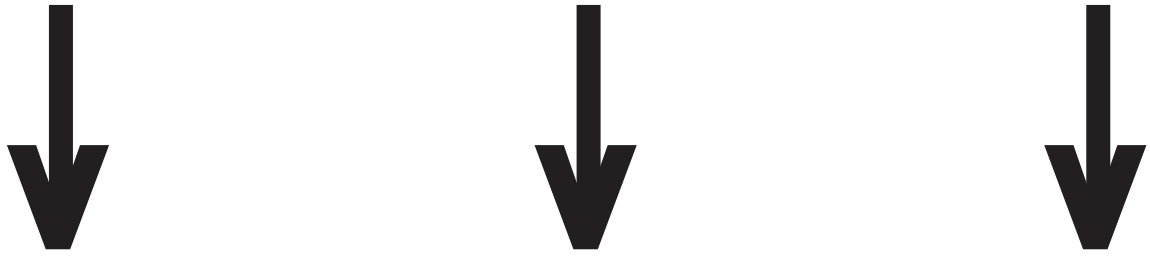
12 ÷ 4 = 3



Hint : think multiplication! 4 x ? = 12

DIVISION

$$16 \div 4 = 4$$

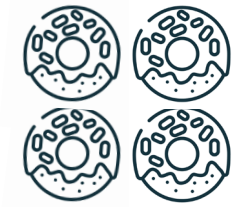
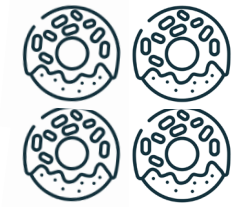


DIVIDEND DIVISOR QUOTIENT

MULTIPLES OF FOUR

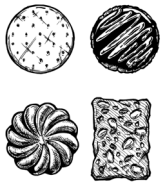
4  8  12 

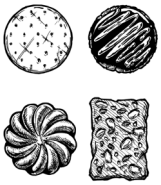
16  20  24 

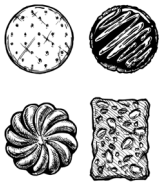
28  32  36 

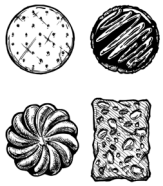
40  44  48 

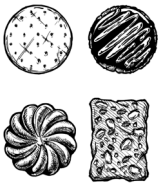
MULTIPLES OF FOUR

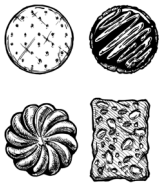
4 

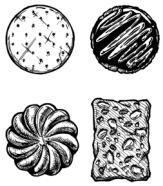
8 

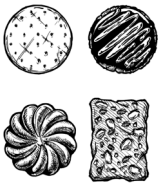
12 

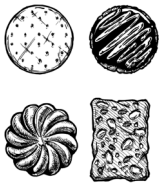
16 

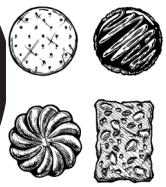
20 

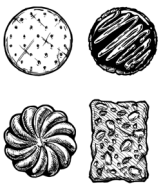
24 

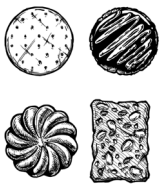
28 

32 

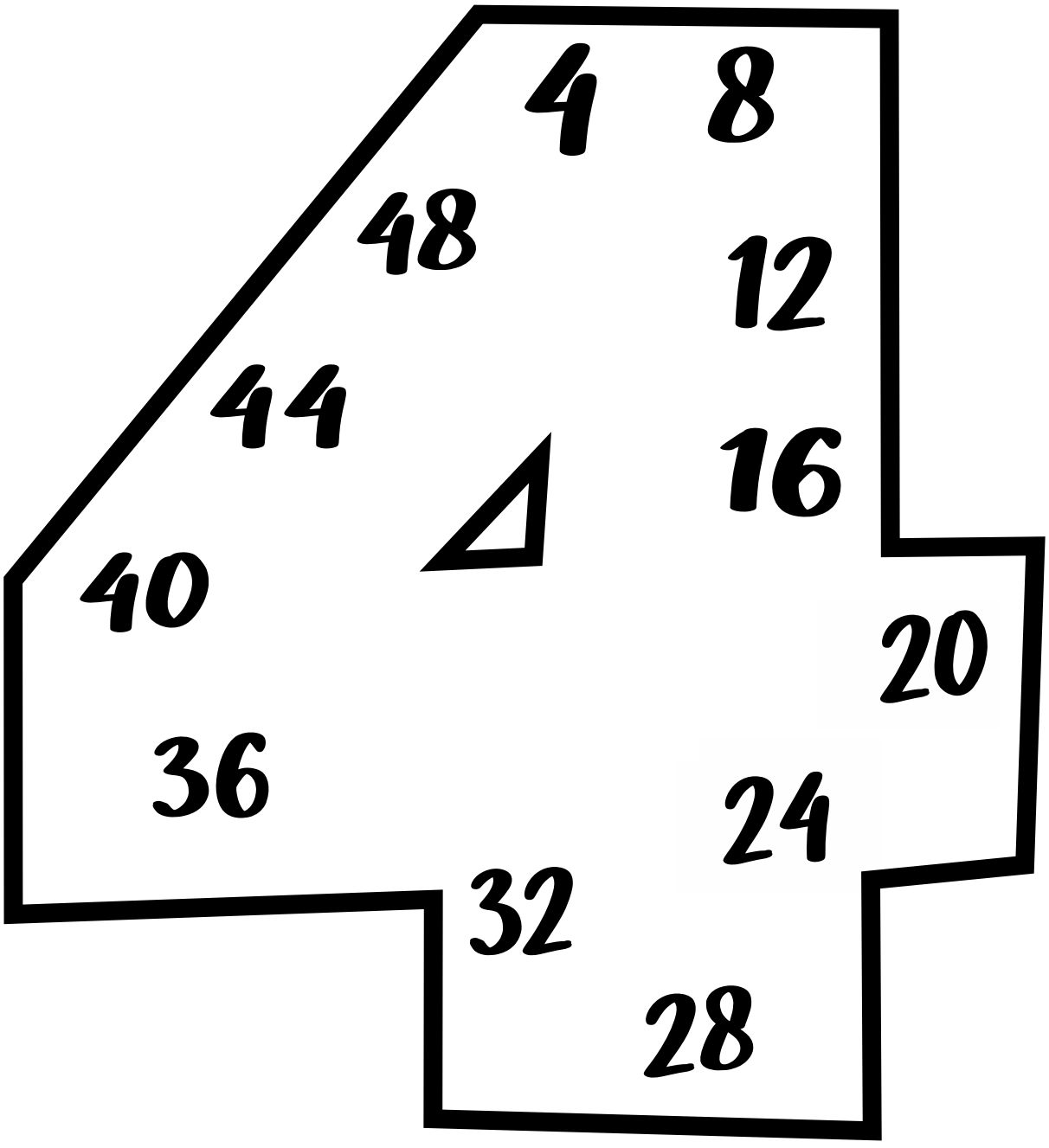
36 

40 

44 

48 

MULTIPLES OF 4

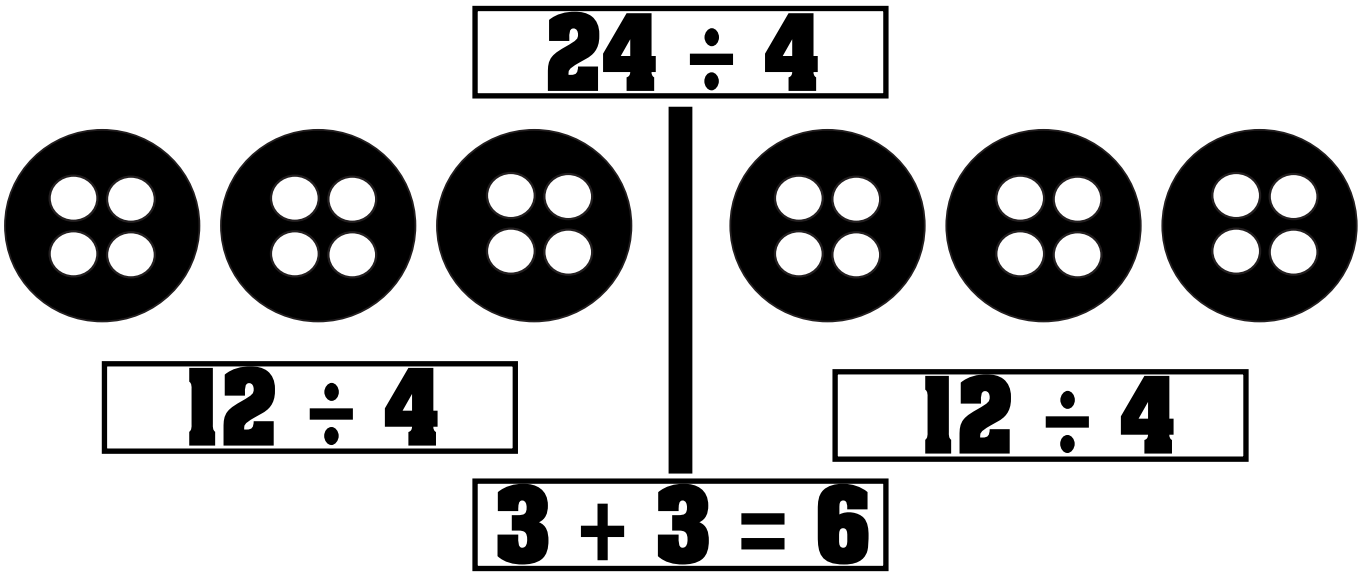


VOCABULARY

DISTRIBUTIVE PROPERTY

There were 24 marbles. I put 4 in each bag. How many bags did I use?

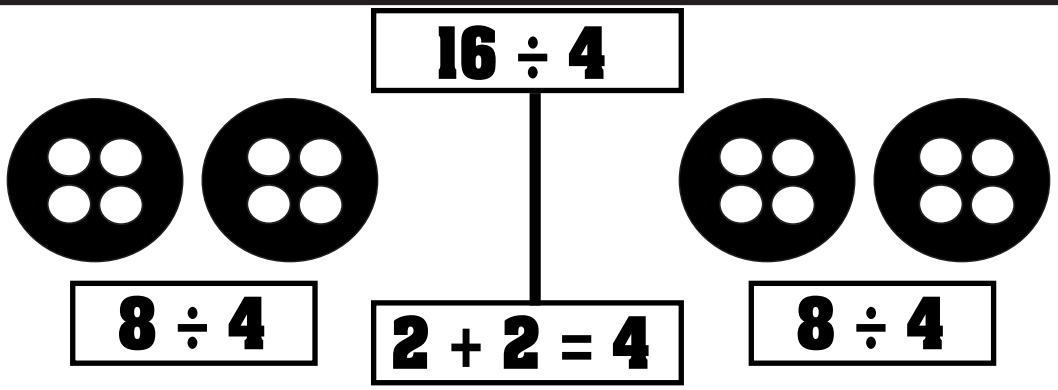
$$24 \div 4 = (12 \div 4) + (12 \div 4) = 4 + 4 = 8$$



MODEL THE FACT

There were 16 marbles. I put 4 in each bag. How many bags did I use?

$$16 \div 4 = (8 \div 4) + (8 \div 4)$$

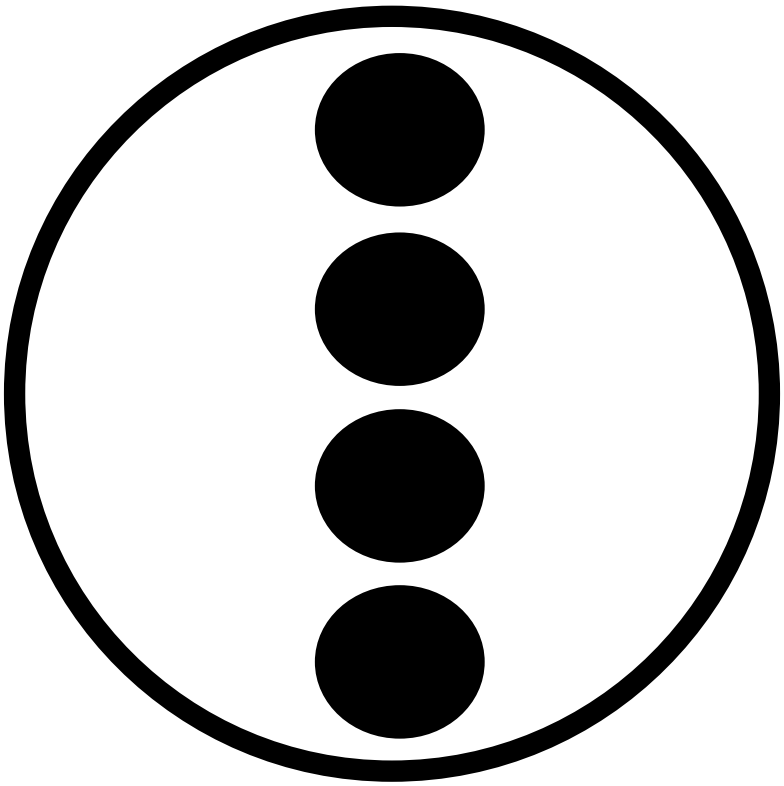


IDENTITY PROPERTY

DIVIDING A NUMBER BY 1

$$4 \div 1 = 4$$

$16 \div 1$ $12 \div 1$ $8 \div 1$



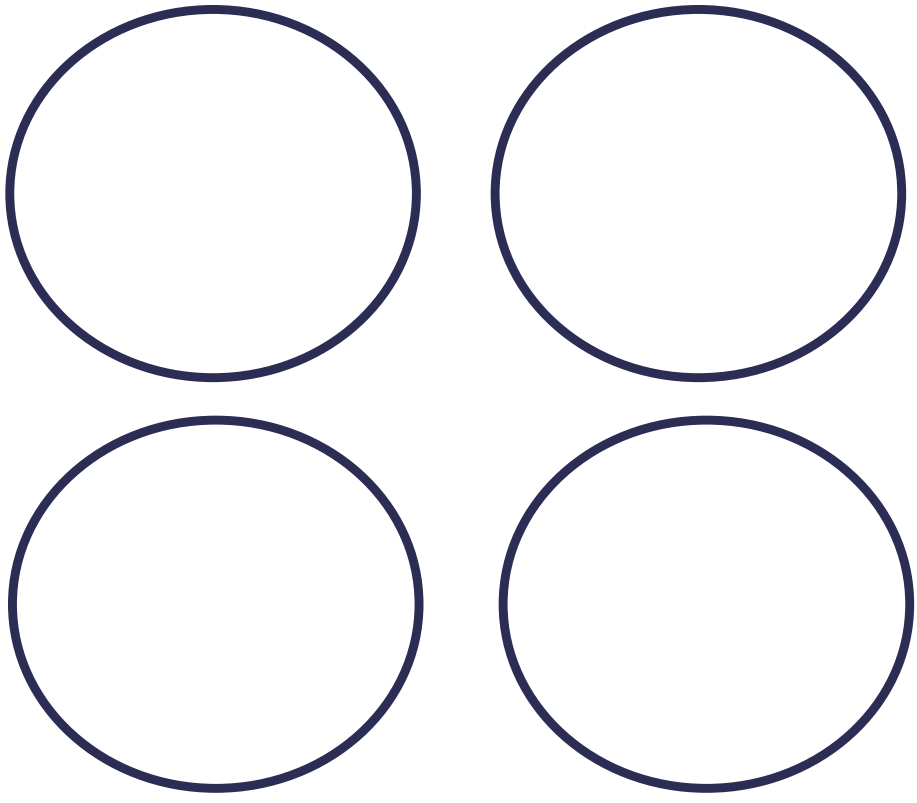
Hint : It's always the number when you divide by 1.

ZERO PROPERTY

DIVIDING 0 BY A NUMBER

$$0 \div 4 = 0$$

$0 \div 2$ $0 \div 10$ $0 \div 1$



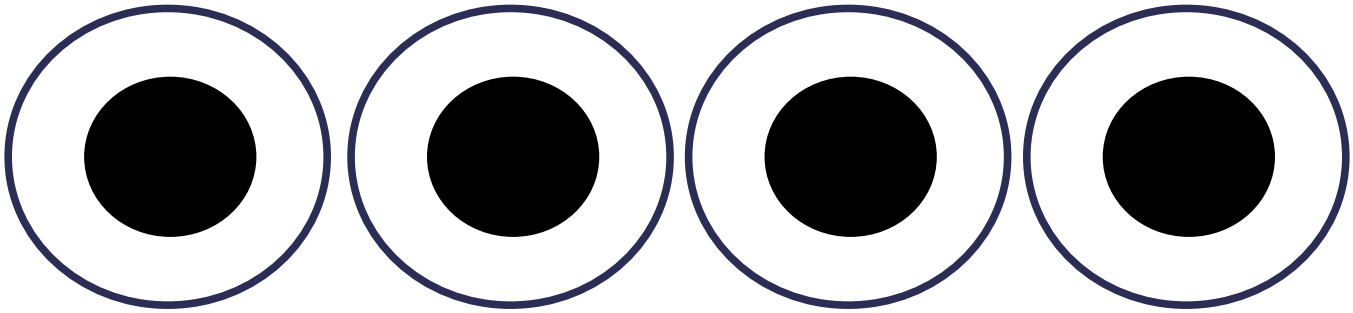
Hint : It's always 0 when you divide zero.

DIVISION BY ITSELF PROPERTY

DIVIDING A NUMBER BY ITSELF

$$4 \div 4 = 1$$

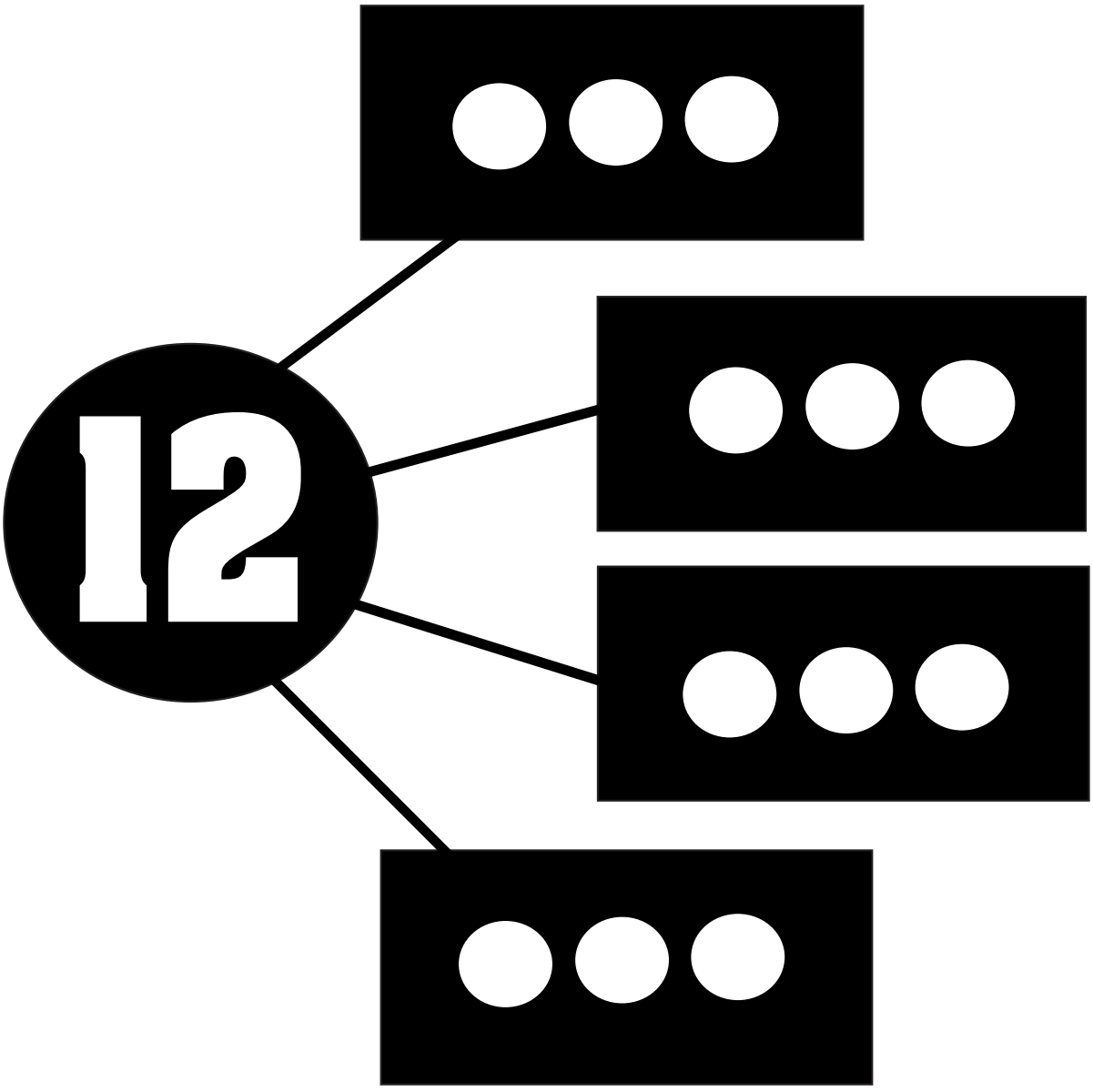
$3 \div 3$ $7 \div 7$ $8 \div 8$



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

Division Strategies:

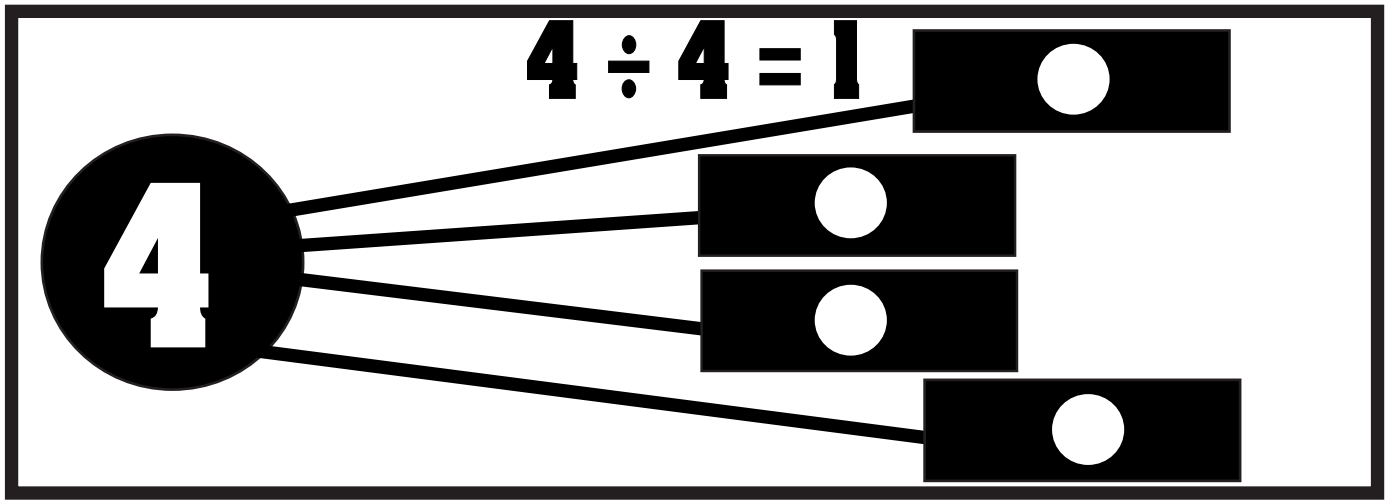
PARTITION

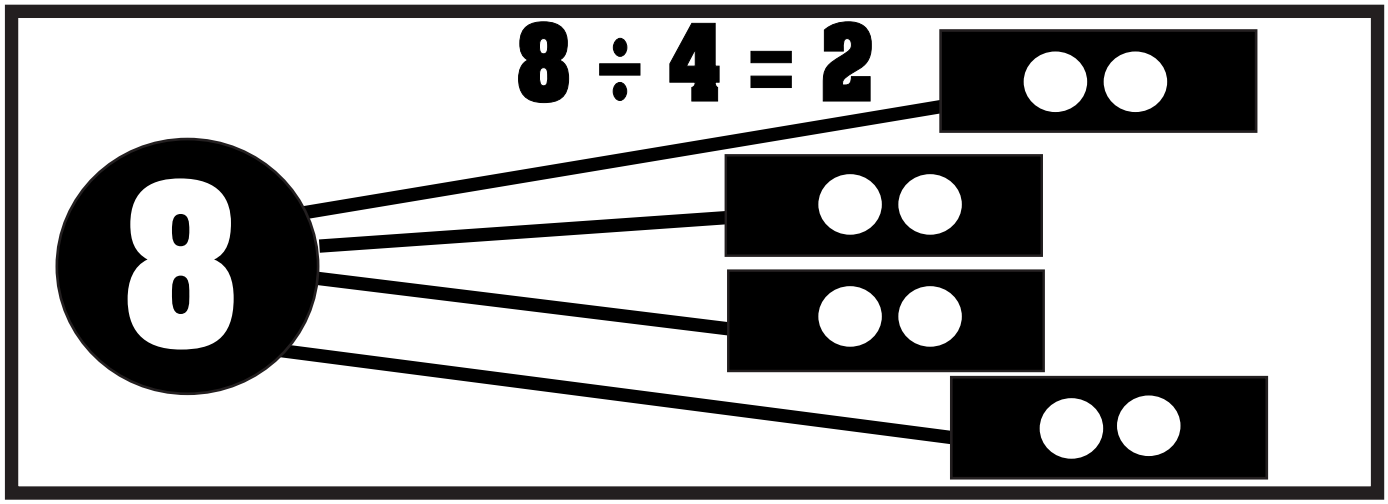


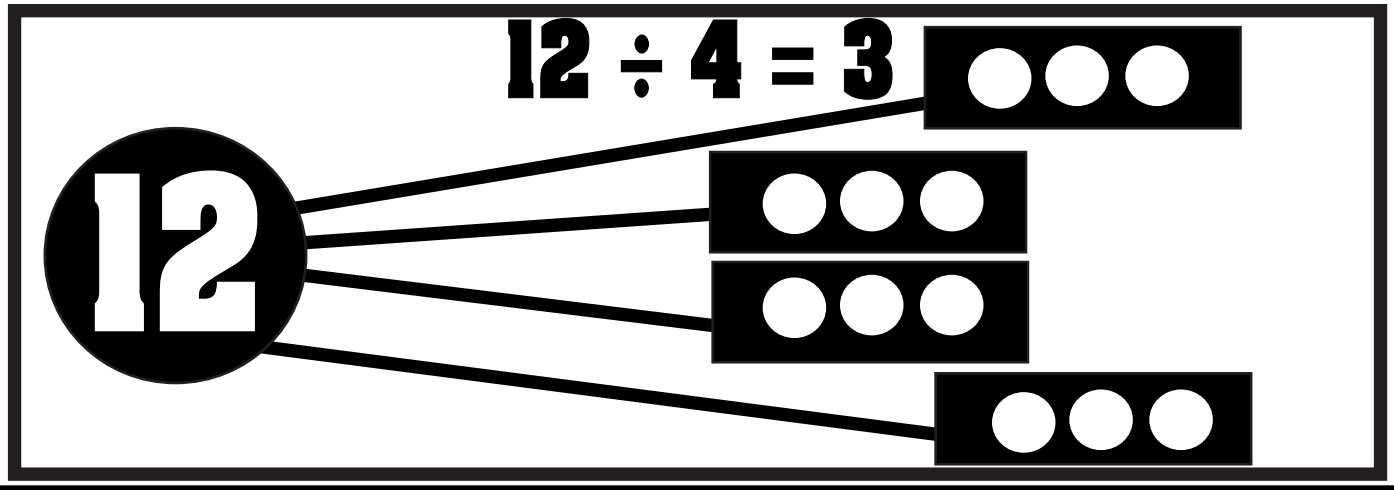
12 ÷ 4 = 3

Division Strategies:

PARTITION

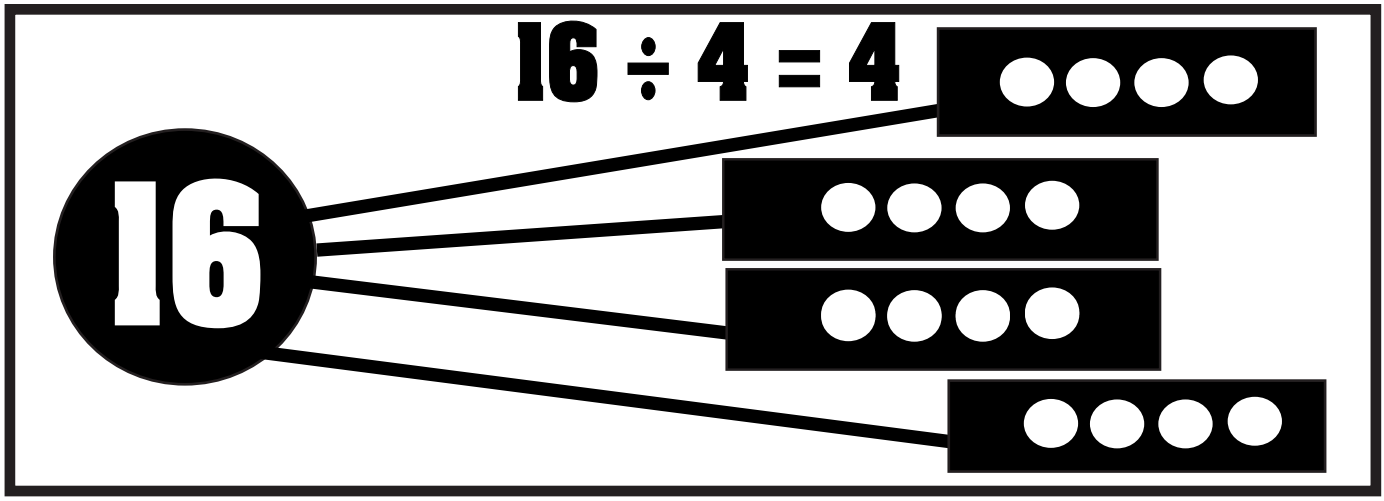


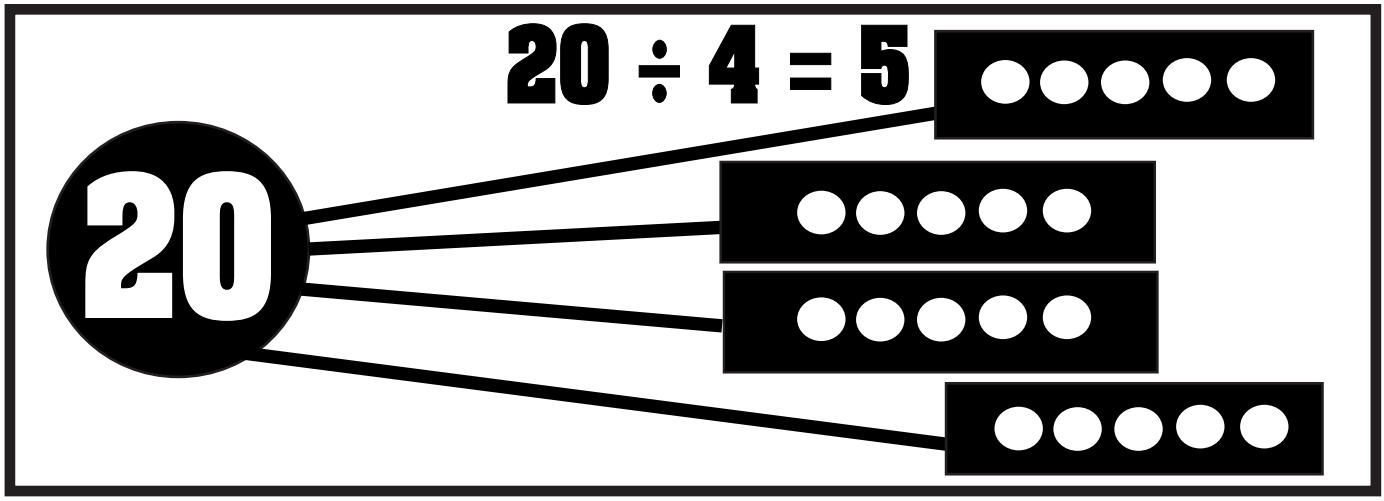


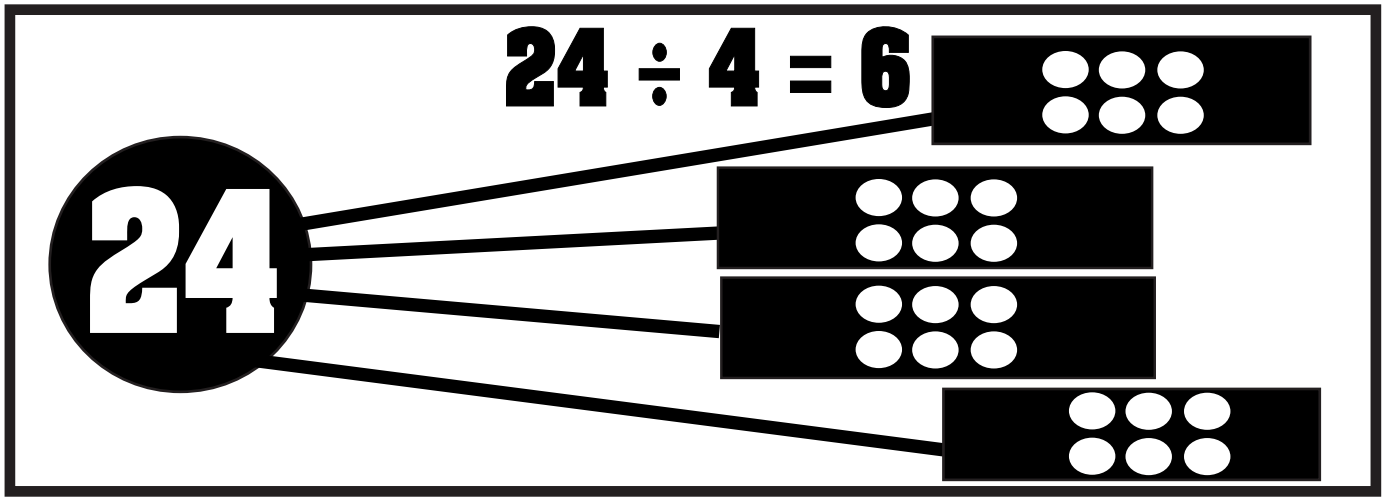


Division Strategies:

PARTITION

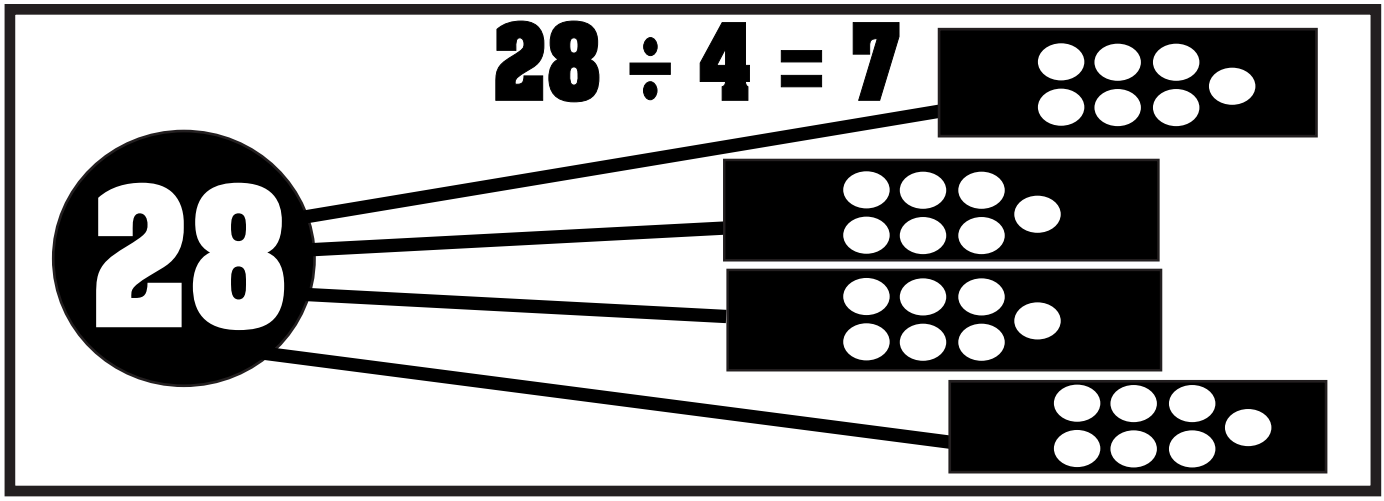


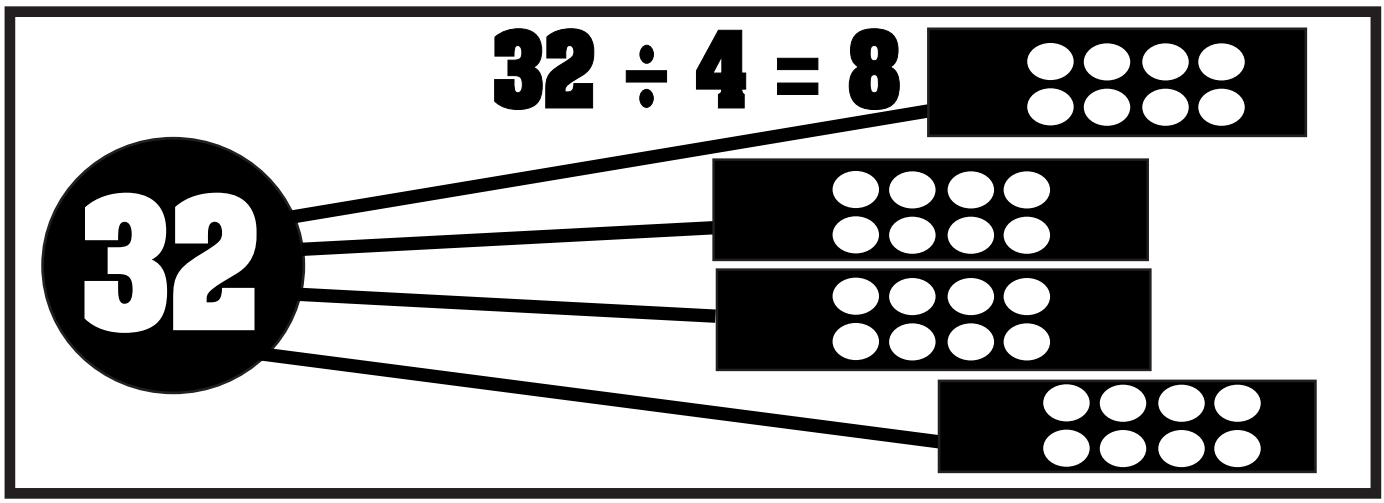


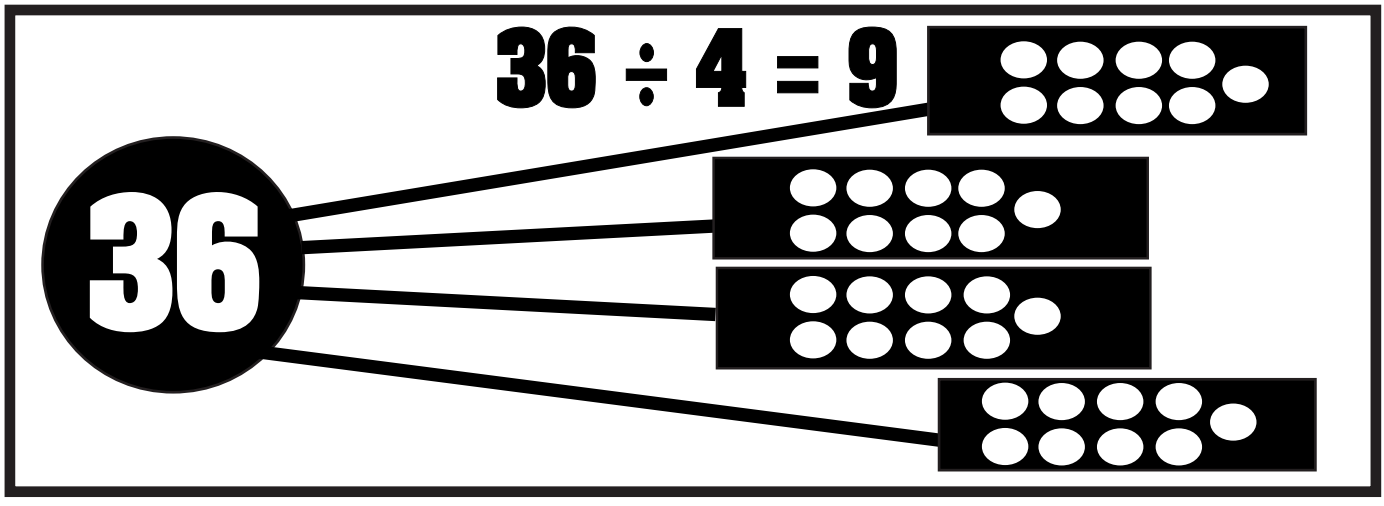


Division Strategies:

PARTITION



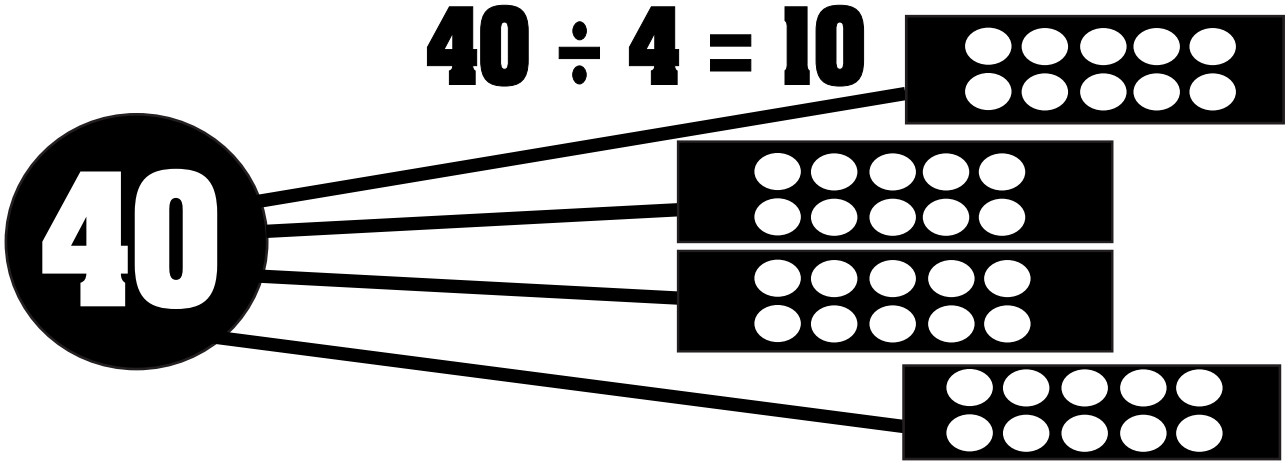




Division Strategies:

PARTITION

$40 \div 4 = 10$



FREE CHOICE

FREE CHOICE

Division Strategies:

RELATED FACT

32 ÷ 4 = 8

think

4 x 8 = 32

4 ÷ 4 = 1

think

4 x 1 = 4

12 ÷ 4 = 3

think

4 x 3 = 12

36 ÷ 4 = 9

think

4 x 9 = 36

Division Strategies:

RELATED FACT

16 ÷ 4 = 4

think

4 x 4 = 16

28 ÷ 4 = 7

think

4 x 7 = 28

20 ÷ 4 = 5

think

4 x 5 = 20

24 ÷ 4 = 6

think

4 x 6 = 24

Division Strategies:

RELATED FACT

8 ÷ 4 = 2

think

4 x 2 = 8

36 ÷ 4 = 9

think

4 x 9 = 36

__ ÷ __ = __

think

__ x __ = __

__ ÷ __ = __

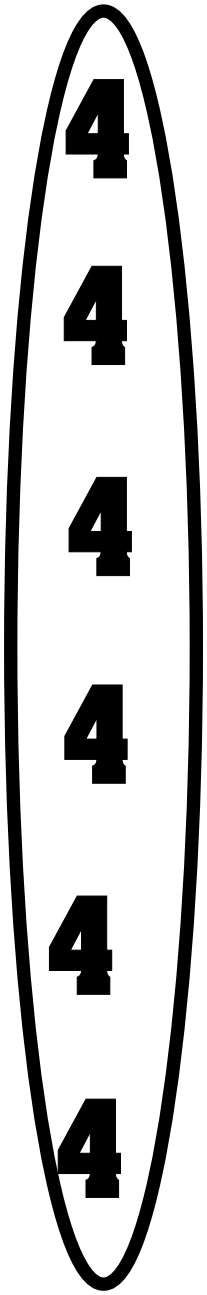
think

__ x __ = __

Division Strategies:

REPEATED SUBTRACTION

24 ÷ 4 = ?



24 - 4 = 20

20 - 4 = 16

16 - 4 = 12

12 - 4 = 8

8 - 4 = 4

4 - 4 = 0

24 ÷ 4 = 6

Division Strategies:

REPEATED SUBTRACTION

24 ÷ 4 = ?

24 - 4 = 20

20 - 4 = 16

16 - 4 = 12

12 - 4 = 8

8 - 4 = 4

4 - 4 = 0

24 ÷ 4 = 6

Division Strategies:

REPEATED SUBTRACTION

28 ÷ 4 = ?

28 - 4 = 24

24 - 4 = 20

20 - 4 = 16

16 - 4 = 12

12 - 4 = 8

8 - 4 = 4

4 - 4 = 0

28 ÷ 4 = 7

Division Strategies:
REPEATED SUBTRACTION

20 ÷ 4 = ?

20 - 4 = 16

16 - 4 = 12

12 - 4 = 8

8 - 4 = 4

4 - 4 = 0

20 ÷ 4 = 5

Division Strategies:

REPEATED SUBTRACTION

$32 \div 4 = ?$

$32 - \underline{4} = 28$

$28 - \underline{4} = 24$

$24 - \underline{4} = 20$

$\underline{20} - 4 = 16$

$\underline{16} - 4 = 12$

$12 - \underline{4} = 8$

$8 - \underline{4} = 4$

$\underline{4} - 4 = 0$

$32 \div 4 = \boxed{8}$

Division Strategies:

REPEATED SUBTRACTION

$40 \div 4 = ?$

$40 - \underline{4} = 36$

$36 - \underline{4} = 32$

$32 - \underline{4} = 28$

$28 - \underline{4} = 24$

$24 - \underline{4} = 20$

$\underline{20} - 4 = 16$

$\underline{16} - 4 = 12$

$12 - \underline{4} = 8$

$8 - \underline{4} = 4$

$\underline{4} - 4 = 0$

$40 \div 4 = \boxed{10}$

Modeling Division:
SKIP COUNTING

DRAW ON A NUMBER LINE

4 8 12 16 20 24 28 32 36 40

4 8 12 16 20 24 28 32 36 40

FILL IN THE MISSING NUMBERS

4	8	12	16	20	24	28	32	36	40

4	8	12	16	20	24	28	32	36	40

Modeling Division:

SKIP COUNTING

FILL IN THE MISSING NUMBERS

4	8	12	16	20	24	28	32	36	40

FILL IN THE MISSING NUMBERS

4	8	12	16	20	24	28	32	36	40

FILL IN THE MISSING NUMBERS

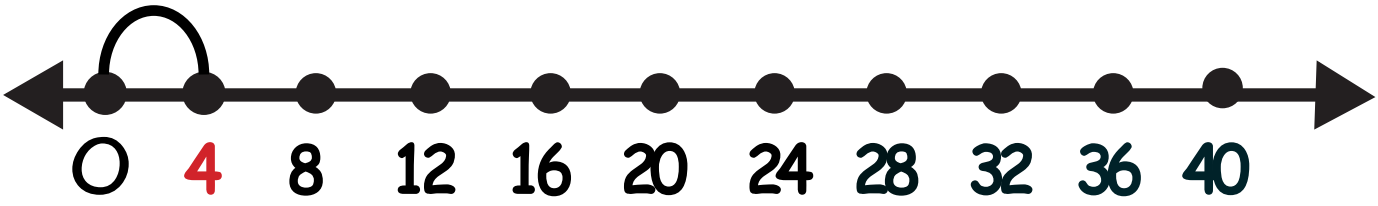
4	8	12	16	20	24	28	32	36	40

FILL IN THE MISSING NUMBERS

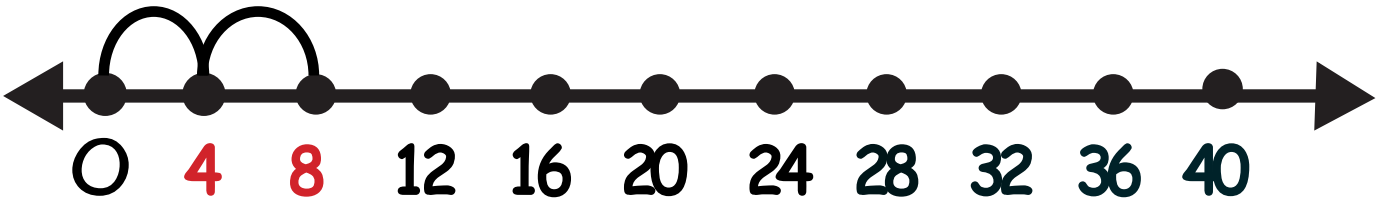
4	8	12	16	20	24	28	32	36	40

Division Strategies:
SKIP COUNTING

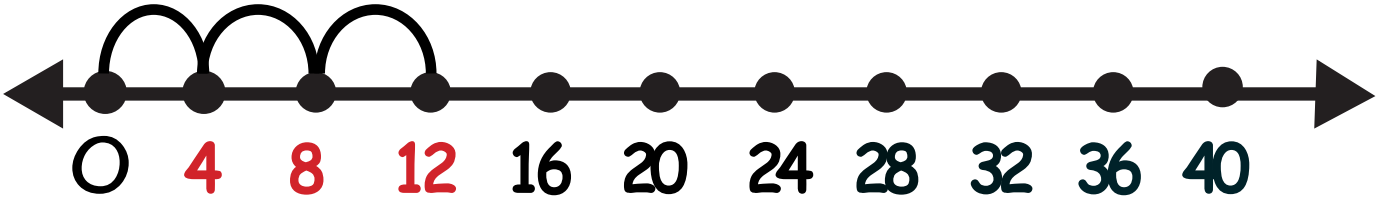
MODEL 4 ÷ 4 ON THE NUMBER LINE.



MODEL 8 ÷ 4 ON THE NUMBER LINE.

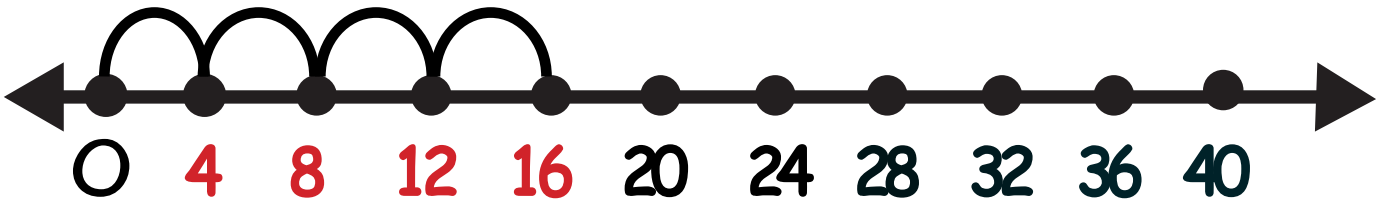


MODEL 12 ÷ 4 ON THE NUMBER LINE.

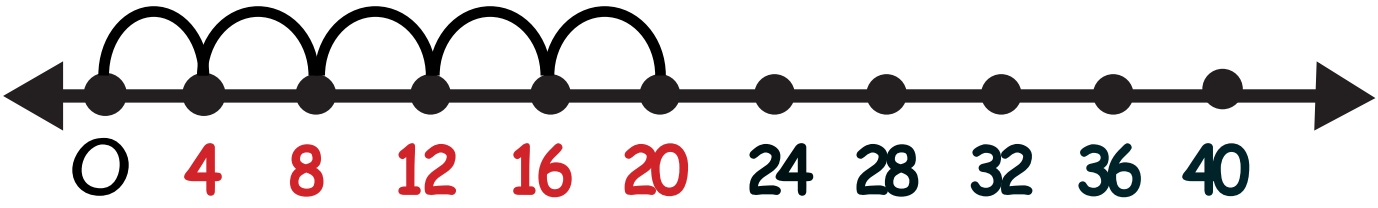


Division Strategies:
SKIP COUNTING

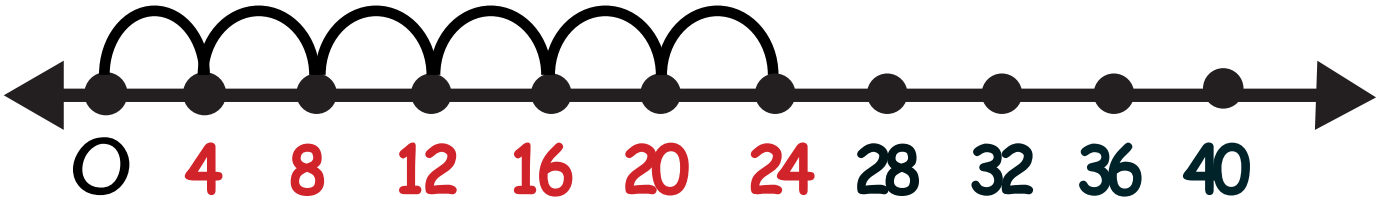
MODEL 16 ÷ 4 ON THE NUMBER LINE.



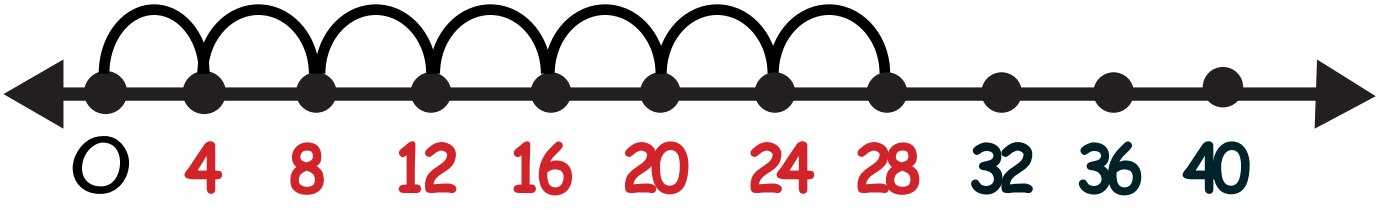
MODEL 20 ÷ 4 ON THE NUMBER LINE.



MODEL 24 ÷ 4 ON THE NUMBER LINE.

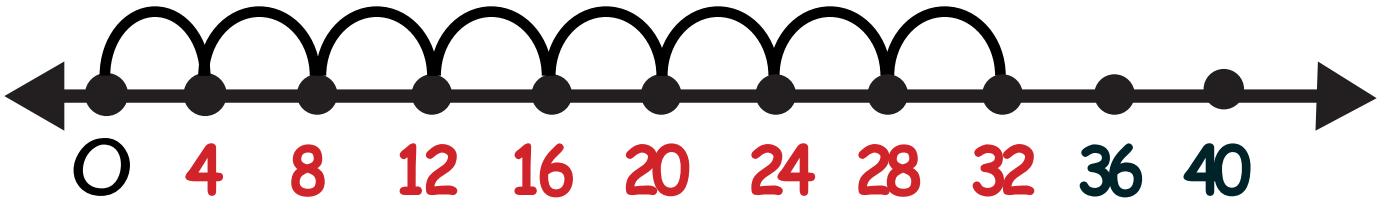


MODEL 28 ÷ 4 ON THE NUMBER LINE.

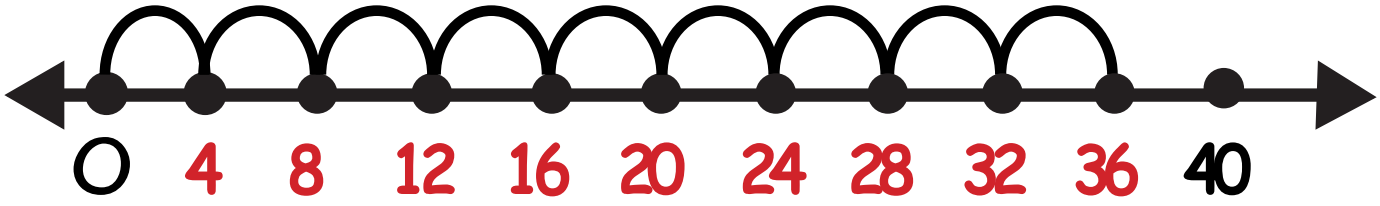


Division Strategies:
SKIP COUNTING

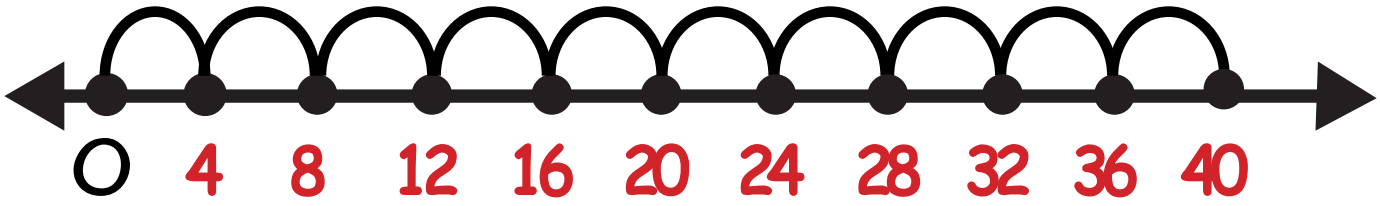
MODEL 32 ÷ 4 ON THE NUMBER LINE.



MODEL 36 ÷ 4 ON THE NUMBER LINE.



MODEL 40 ÷ 4 ON THE NUMBER LINE.

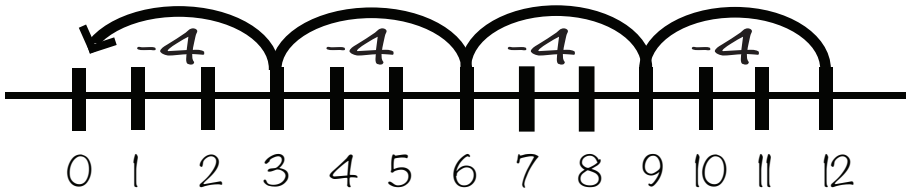


Division Strategies:

NUMBER LINES

THERE ARE 12 COOKIES AND YOU PUT 4 IN A BAG. HOW MANY BAGS DO YOU HAVE?

12 ÷ 4 = 3



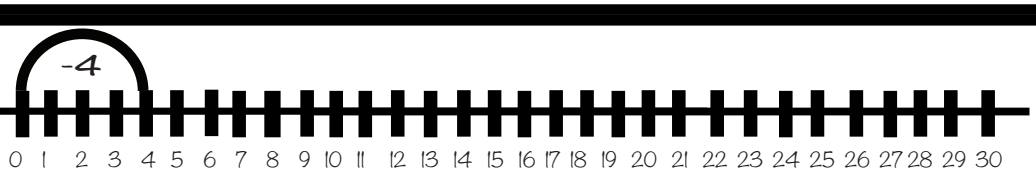
HOW MANY JUMPS UNTIL YOU GET TO ZERO?

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)?

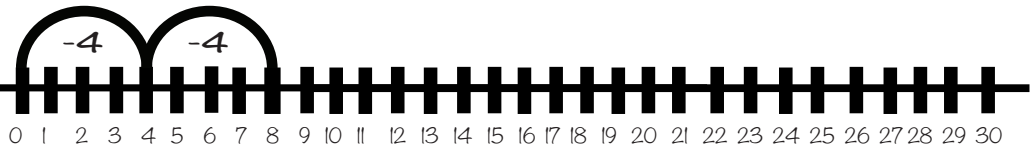
SOLVE THE PROBLEM ON THE NUMBER LINE.

HOW MANY JUMPS UNTIL YOU GET TO ZERO?

4 ÷ 4

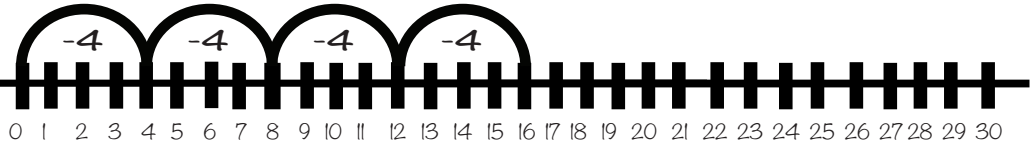


8 ÷ 4



12 ÷ 4

16 ÷ 4



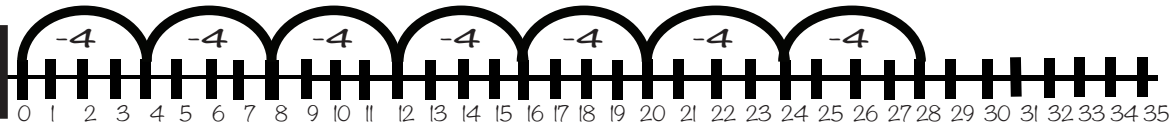
Division Strategies:

NUMBER LINES

20 ÷ 4

24 ÷ 4

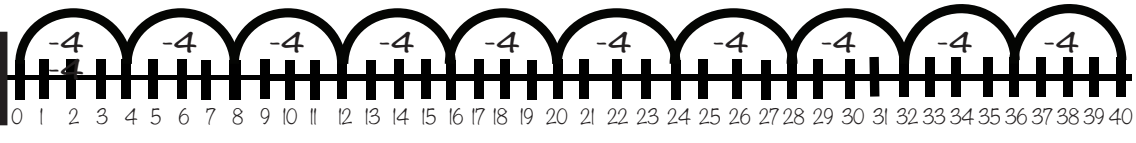
28 ÷ 4



32 ÷ 4

36 ÷ 4

40 ÷ 4



Division Strategies:
SKIP COUNTING CHART

4	24
8	28
12	32
16	36
20	40

Division Vocabulary

dividend | divisor | quotient

$$16 \div 4 = 4$$

quotient

divisor

$$4 \overline{)\,16\,} = 4$$

dividend

dividend

$$\frac{16}{4} = 4$$

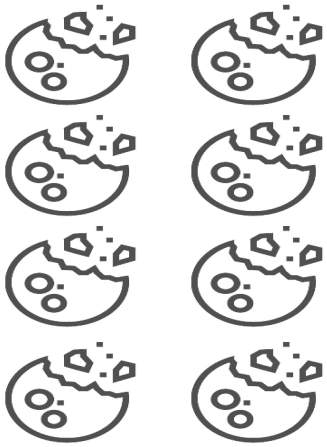
divisor

quotient

Array Flashcards

USE THE MODEL TO SOLVE

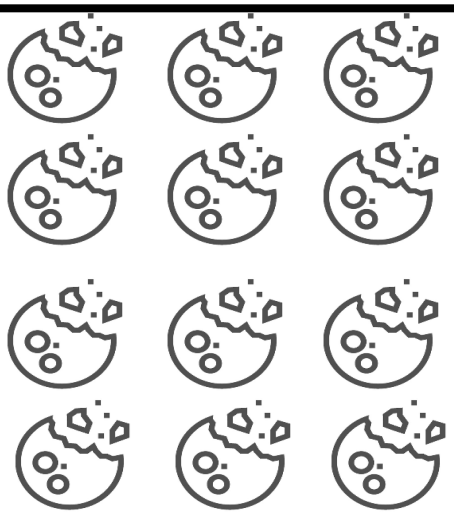
4 ÷ 4 = 1



8 ÷ 4 = 2

Array Flashcards

USE THE MODEL TO SOLVE



$12 \div 4 = \underline{3}$

$16 \div 4 = \underline{4}$

Array Flashcards

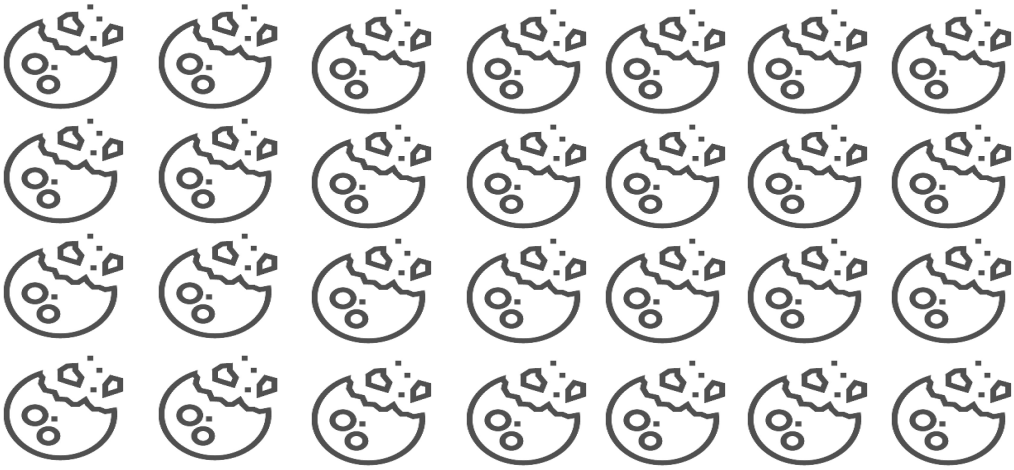
USE THE MODEL TO SOLVE

20 ÷ 4 = 5

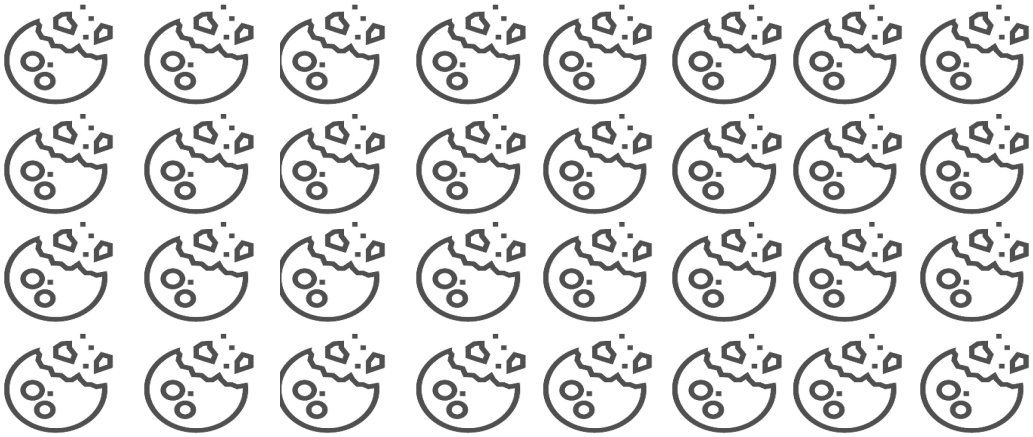
24 ÷ 4 = 6

Array Flashcards

USE THE MODEL TO SOLVE



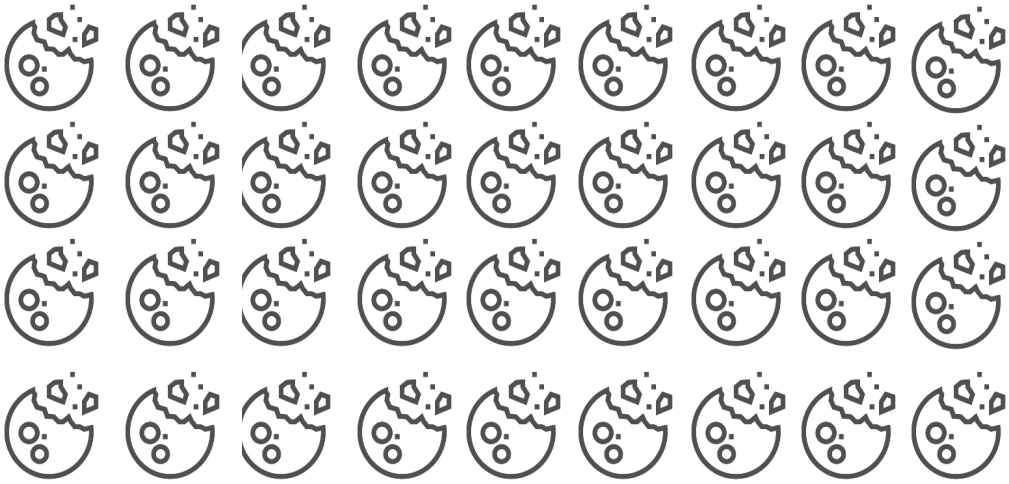
$28 \div 4 = \underline{7}$



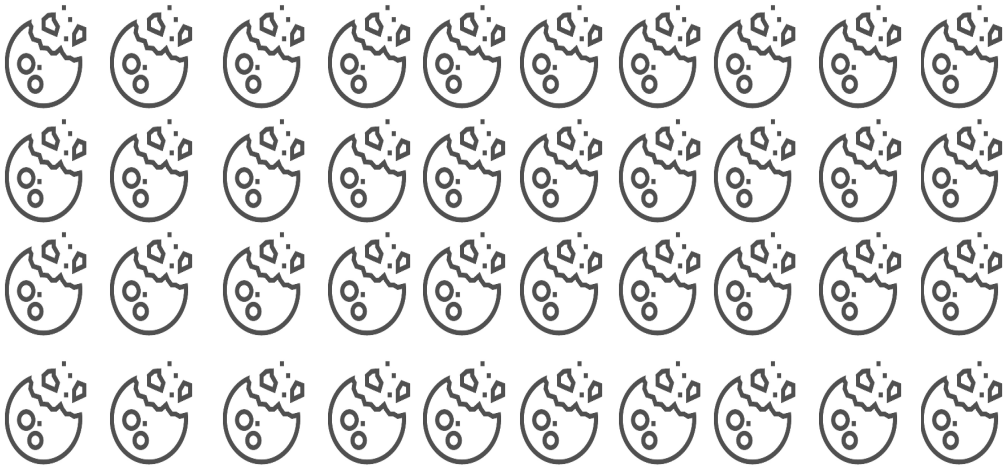
$32 \div 4 = \underline{8}$

Array Flashcards

USE THE MODEL TO SOLVE



36 ÷ 4 = 9



40 ÷ 4 = 10

Array Flashcards

WRITE AN EQUATION THAT MATCHES THE ARRAY

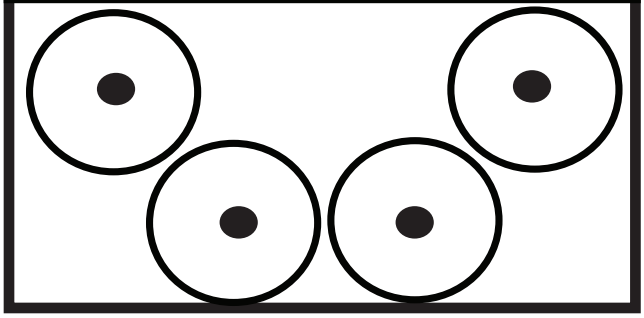
FREE CHOICE

FREE CHOICE

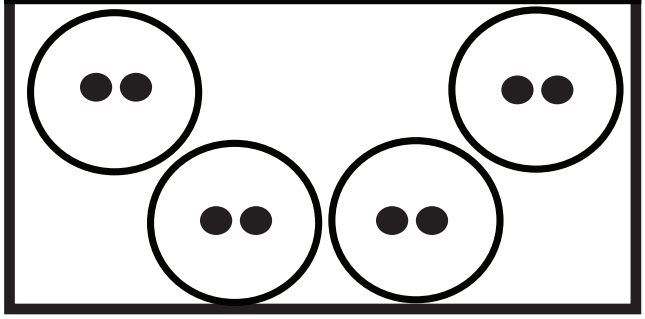
Equal Group Flashcards

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

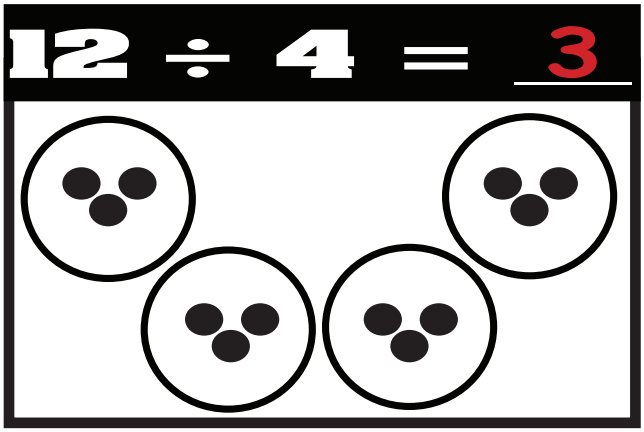
4 ÷ 4 = 1



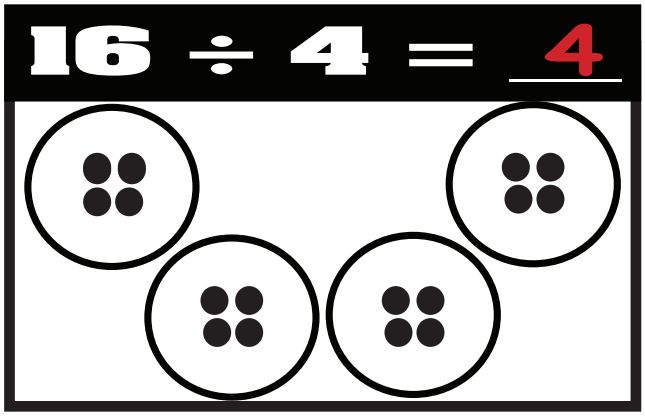
8 ÷ 4 = 2



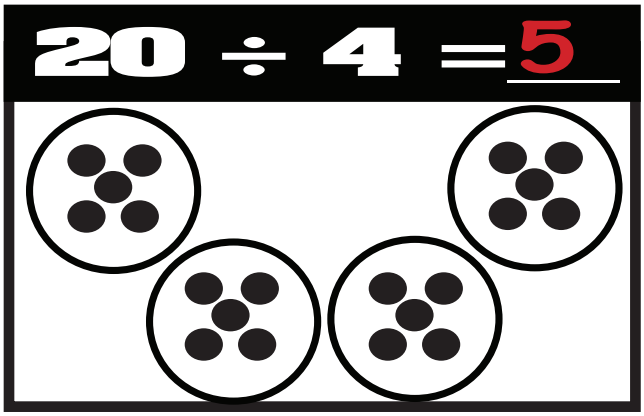
12 ÷ 4 = 3



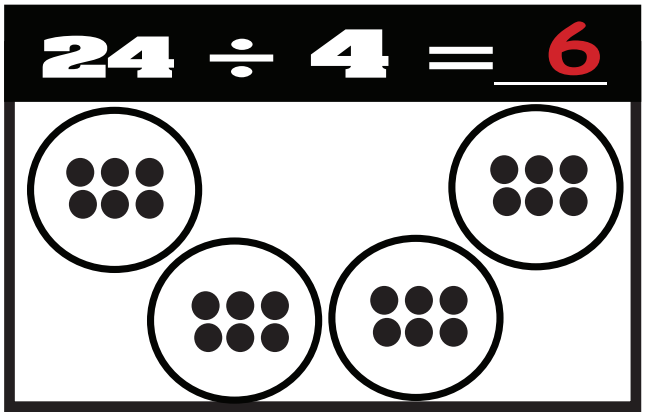
16 ÷ 4 = 4



20 ÷ 4 = 5



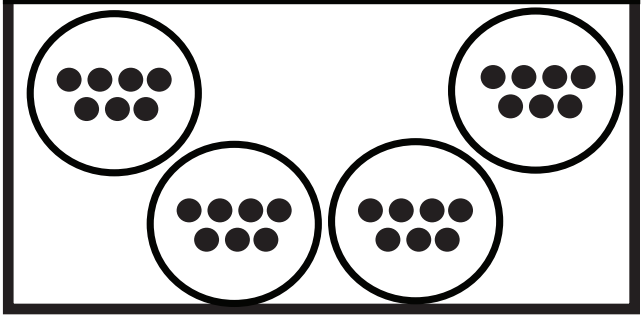
24 ÷ 4 = 6



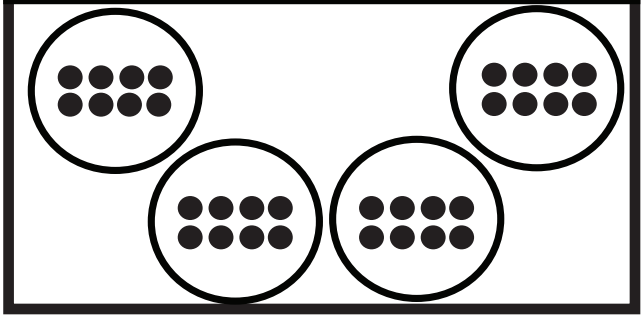
Equal Group Flashcards

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

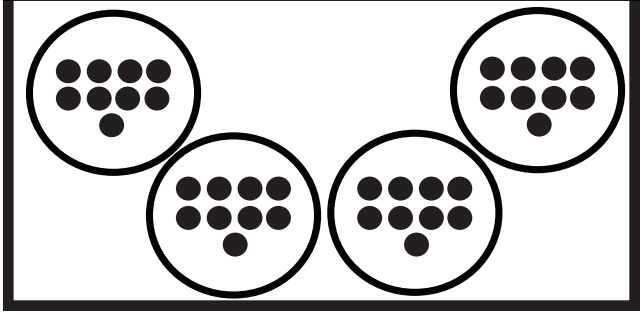
28 ÷ 4 = 7



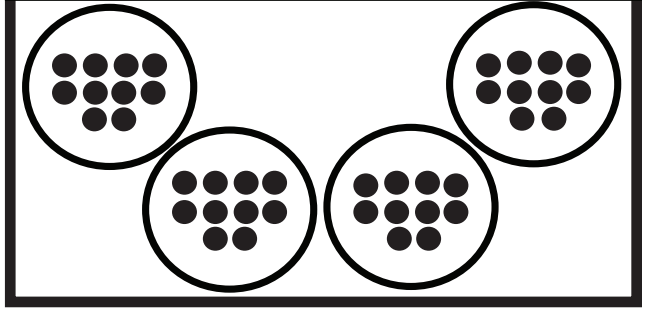
32 ÷ 4 = 8



36 ÷ 4 = 9



40 ÷ 4 = 10



Regular Flashcards

$0 \div 4$	$4 \div 4$
$8 \div 4$	$12 \div 4$
$16 \div 4$	$20 \div 4$

Regular Flashcards

24 ÷ 4	28 ÷ 4
32 ÷ 4	36 ÷ 4
40 ÷ 4	

Dividing By 4 Calling Cards

0	1	2	3	4
5	6	7	8	9
		10		

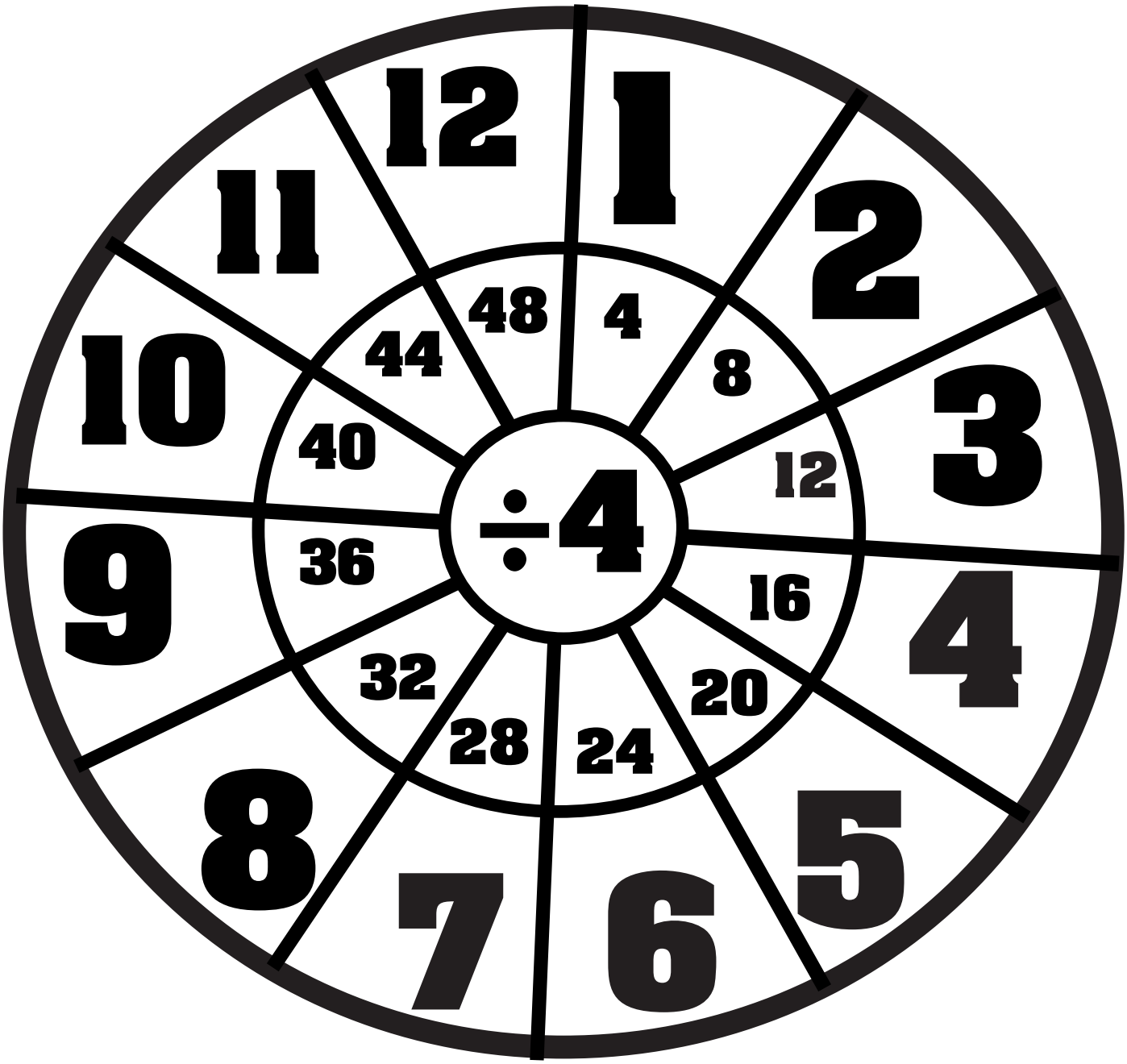
Dividing by 4
4 IN A ROW

28 ÷ 4 = ?	4 ÷ 4 = ?	16 ÷ 4 = ?	36 ÷ 4 = ?	32 ÷ 4 = ?	8 ÷ 4 = ?
28 ÷ 4 = ?	20 ÷ 4 = ?	40 ÷ 4 = ?	24 ÷ 4 = ?	28 ÷ 4 = ?	12 ÷ 4 = ?
24 ÷ 4 = ?	12 ÷ 4 = ?	20 ÷ 4 = ?	8 ÷ 4 = ?	24 ÷ 4 = ?	32 ÷ 4 = ?
0 ÷ 4 = ?	16 ÷ 4 = ?	20 ÷ 4 = ?	32 ÷ 4 = ?	24 ÷ 4 = ?	4 ÷ 4 = ?
36 ÷ 4 = ?	40 ÷ 4 = ?	32 ÷ 4 = ?	28 ÷ 4 = ?	40 ÷ 4 = ?	20 ÷ 4 = ?
40 ÷ 4 = ?	36 ÷ 4 = ?	4 ÷ 4 = ?	8 ÷ 4 = ?	28 ÷ 4 = ?	28 ÷ 4 = ?
36 ÷ 4 = ?	28 ÷ 4 = ?	40 ÷ 4 = ?	12 ÷ 4 = ?	40 ÷ 4 = ?	28 ÷ 4 = ?

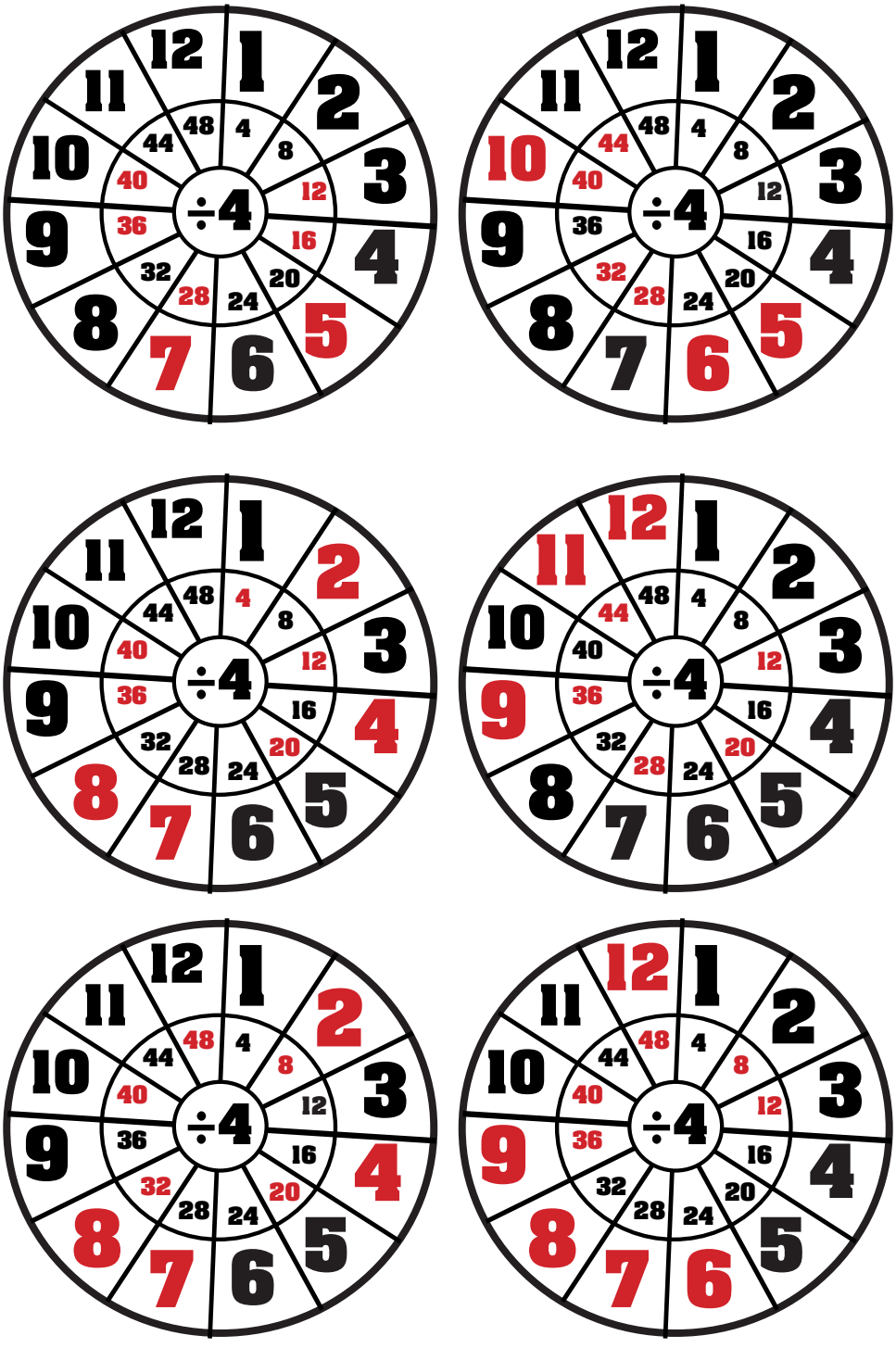
Instructions:

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



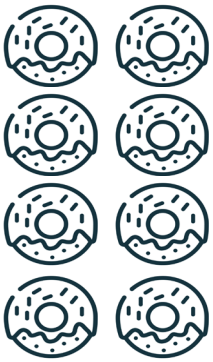
PICTURE FACT FAMILY

$4 \times 1 = 4$

$1 \times 4 = 4$

$4 \div 1 = 4$

$4 \div 4 = 1$



$4 \times 2 = 8$

$2 \times 4 = 8$

$8 \div 2 = 4$

$8 \div 4 = 2$

$4 \times 3 = 12$

$3 \times 4 = 12$

$12 \div 3 = 4$

$12 \div 4 = 3$

$4 \times 4 = 16$

$4 \times 4 = 16$

$16 \div 4 = 4$

$16 \div 4 = 4$

PICTURE FACT FAMILY

$4 \times 5 = 20$

$5 \times 4 = 20$

$20 \div 5 = 4$

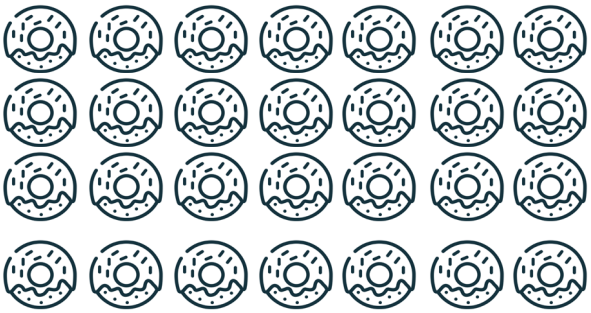
$20 \div 4 = 5$

$4 \times 6 = 24$

$6 \times 4 = 24$

$24 \div 6 = 4$

$24 \div 4 = 6$



$4 \times 7 = 28$

$7 \times 4 = 28$

$28 \div 7 = 4$

$28 \div 4 = 7$

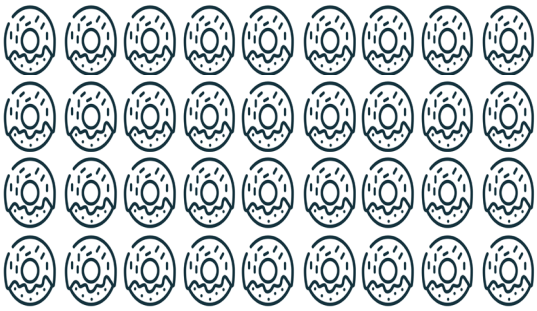
$4 \times 8 = 32$

$8 \times 4 = 32$

$32 \div 8 = 4$

$32 \div 4 = 8$

PICTURE FACT FAMILY



$4 \times 9 = 36$

$9 \times 4 = 36$

$36 \div 9 = 4$

$36 \div 4 = 9$

MAKE YOUR OWN

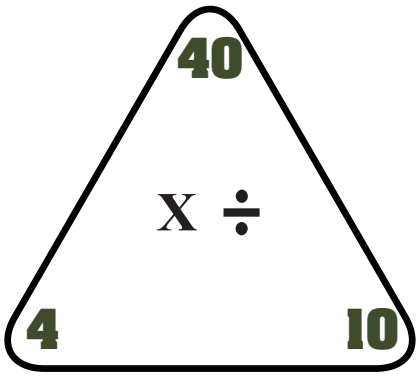
____ x ____ = ____

____ x ____ = ____

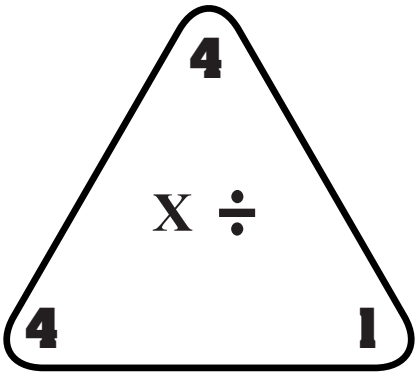
____ ÷ ____ = ____

____ ÷ ____ = ____

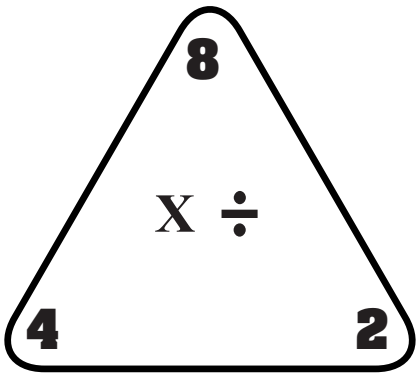
TRIANGLE FACT FAMILY



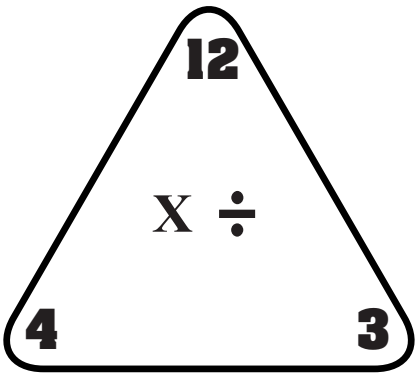
4 x 10 = 40
10 x 4 = 40
40 ÷ 10 = 4
40 ÷ 4 = 10



4 x 1 = 4
1 x 4 = 4
4 ÷ 1 = 4
4 ÷ 4 = 1

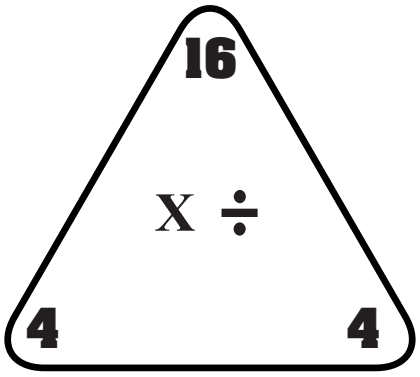


4 x 2 = 8
2 x 4 = 8
8 ÷ 2 = 4
8 ÷ 4 = 2

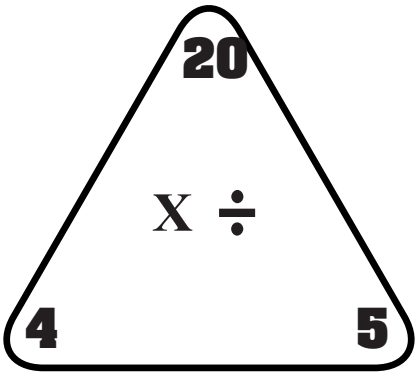


4 x 3 = 12
3 x 4 = 12
12 ÷ 3 = 4
12 ÷ 4 = 3

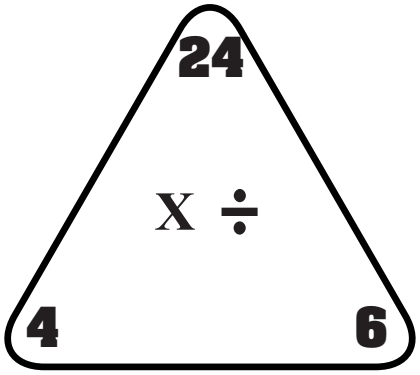
TRIANGLE FACT FAMILY



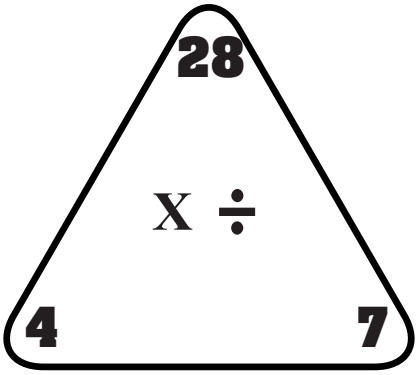
4 x 4 = 16
4 x 4 = 16
16 ÷ 4 = 4
16 ÷ 4 = 4



4 x 5 = 20
5 x 4 = 20
20 ÷ 5 = 4
20 ÷ 4 = 5

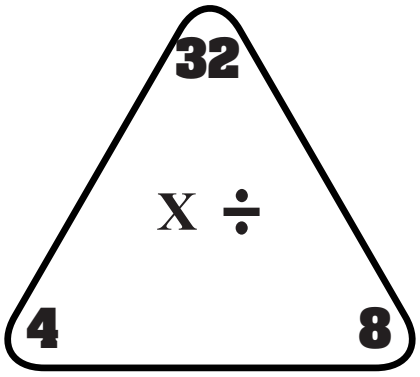


4 x 6 = 24
6 x 4 = 24
24 ÷ 6 = 4
24 ÷ 4 = 6

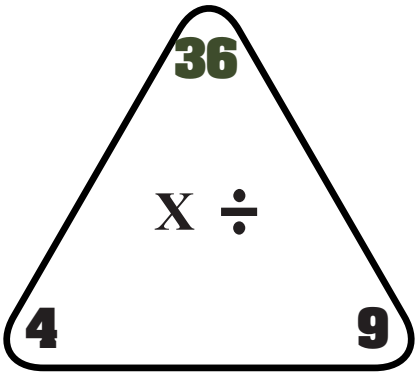


4 x 7 = 28
7 x 4 = 28
28 ÷ 7 = 4
28 ÷ 4 = 7

TRIANGLE FACT FAMILY

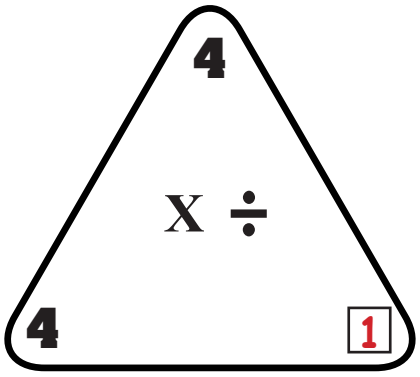


4	x	8	=	32
8	x	4	=	32
32	÷	8	=	4
32	÷	4	=	8

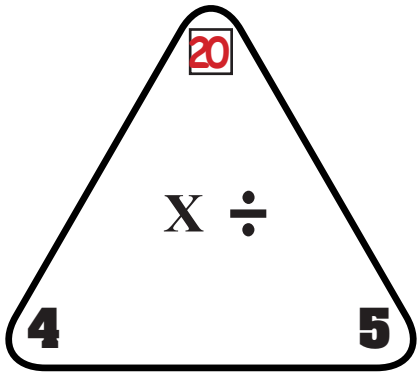


4	x	9	=	36
9	x	4	=	36
36	÷	9	=	4
36	÷	4	=	9

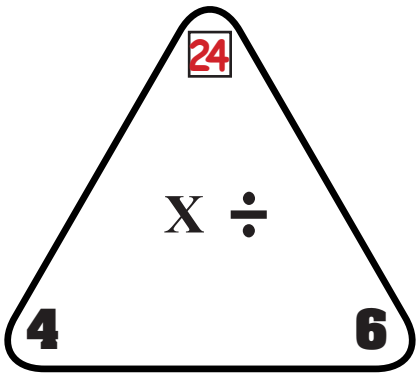
TRIANGLE FACT FAMILY



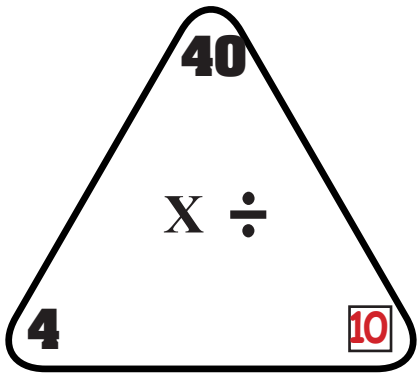
4	x	1	=	4
1	x	4	=	4
4	÷	1	=	4
4	÷	4	=	1



4	x	5	=	20
5	x	4	=	20
20	÷	5	=	4
20	÷	4	=	5

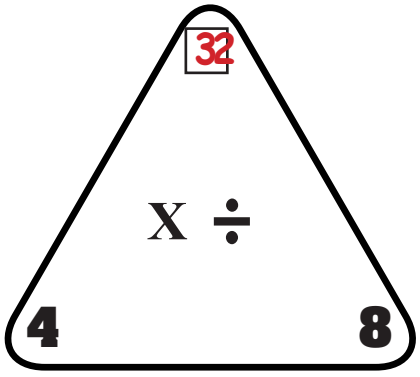


4	x	6	=	24
6	x	4	=	24
24	÷	6	=	4
24	÷	4	=	6

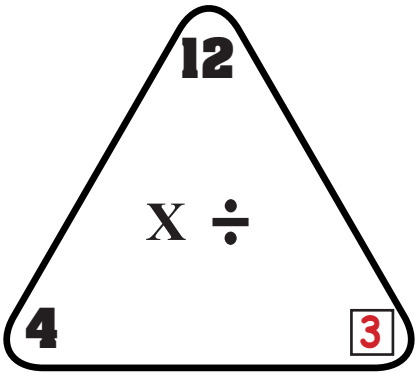


4	x	10	=	40
10	x	4	=	40
40	÷	10	=	4
40	÷	4	=	10

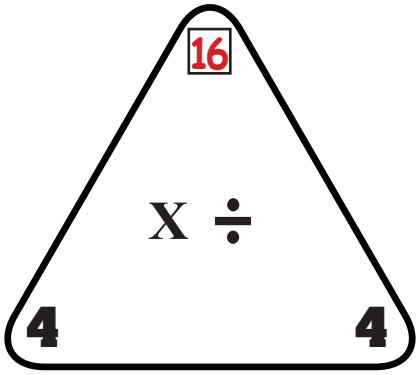
TRIANGLE FACT FAMILY



4 x 8 = 32
8 x 4 = 32
32 ÷ 8 = 4
32 ÷ 4 = 8



4 x 3 = 12
3 x 4 = 12
12 ÷ 3 = 4
12 ÷ 4 = 3



4 x 4 = 16
4 x 4 = 16
16 ÷ 4 = 4
16 ÷ 4 = 4

WORD PROBLEM

MODEL YOUR THINKING AND SOLVE THE PROBLEM.

THE BAKERY HAD 12 DONUTS IN 4 ROWS. THEY HAD THE SAME AMOUNT IN EACH ROW. HOW MANY WERE IN EACH ROW?

12 ÷ 4 = 3

THE BAKERY HAD 16 DONUTS. THEY PUT 4 IN A ROW. HOW MANY ROWS DID THEY MAKE?

16 ÷ 4 = 4

THE BAKERY MADE 40 MUFFINS. THEY PACKED 4 IN A BOX. HOW MANY BOXES DID THEY USE?

40 ÷ 4 = 10

THE BAKERY MADE 8 HAND PIES. THEY USED 4 BOXES. THEY PUT THE SAME AMOUNT OF PIES IN EACH BOX. HOW MANY HAND PIES DID THEY PUT IN EACH BOX?

8 ÷ 4 = 2

QUIZ

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

I CAN SKIP COUNT TO DIVIDE BY 4'S!	I CAN USE EQUAL GROUPS TO DIVIDE BY 4'S!

I CAN USE ARRAYS TO MODEL DIVIDING BY 4'S!	I CAN MODEL DIVIDING BY 4'S ON THE NUMBER LINE!

I CAN USE REPEATED SUBTRACTION TO DIVIDE BY 4'S.	MY STRATEGY FOR THINKING ABOUT DIVIDING BY 4'S IS....

GREAT MATH WORK!

CERTIFICATE

_____

HAS SUCCESSFULLY PRACTICED DIVIDING BY 4'S!

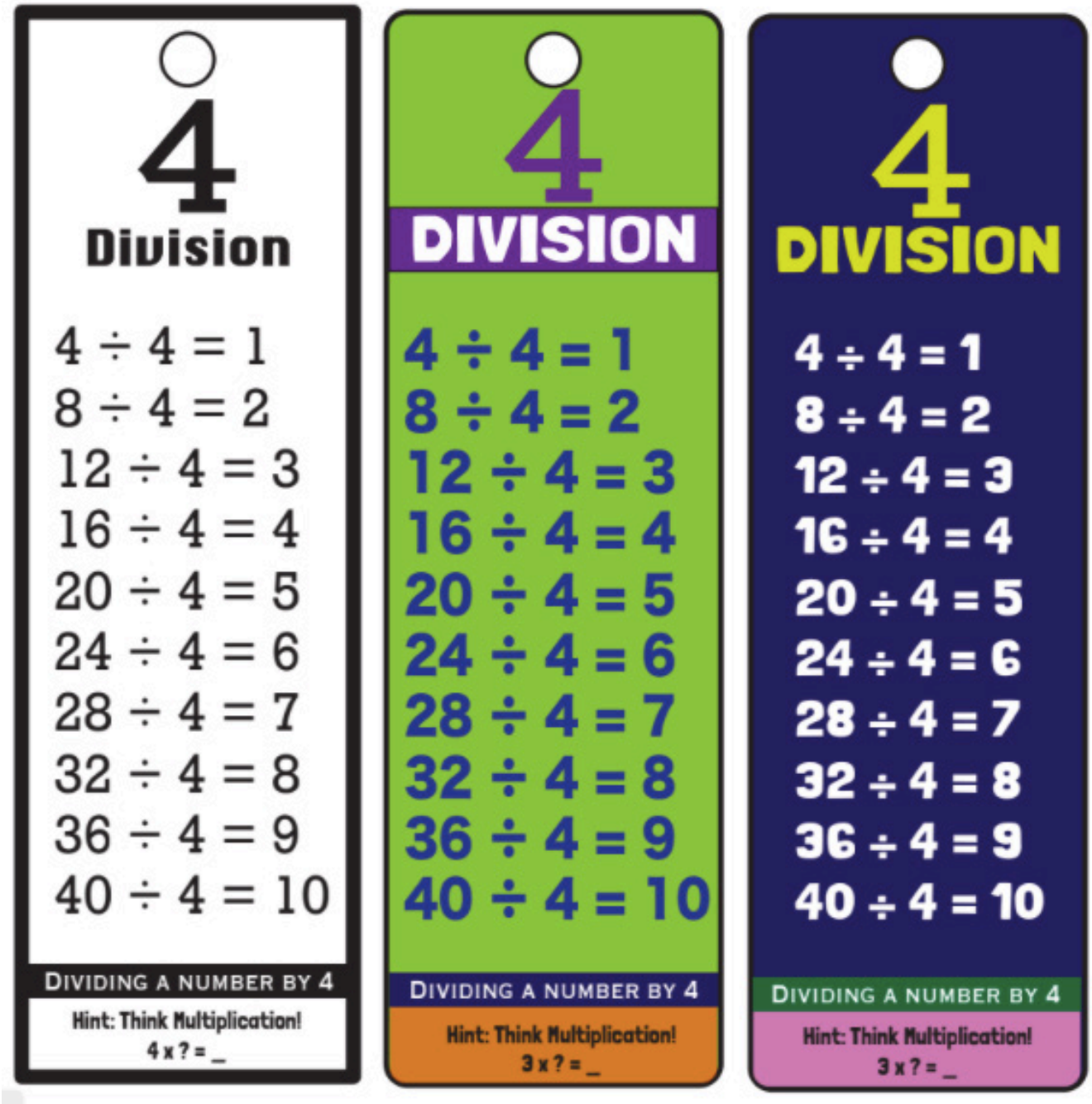
GREAT JOB!

TEACHER: _____ **DATE:** _____

Looking at the 4's

4 ÷ 4 = 1	24 ÷ 4 = 6
8 ÷ 4 = 2	28 ÷ 4 = 7
12 ÷ 4 = 3	32 ÷ 4 = 8
16 ÷ 4 = 4	36 ÷ 4 = 9
20 ÷ 4 = 5	40 ÷ 4 = 10

Bookmarks


4
Division
4 ÷ 4 = 1
8 ÷ 4 = 2
12 ÷ 4 = 3
16 ÷ 4 = 4
20 ÷ 4 = 5
24 ÷ 4 = 6
28 ÷ 4 = 7
32 ÷ 4 = 8
36 ÷ 4 = 9
40 ÷ 4 = 10
DIVIDING A NUMBER BY 4
Hint: Think Multiplication!
4 x ? = _
4
DIVISION
4 ÷ 4 = 1
8 ÷ 4 = 2
12 ÷ 4 = 3
16 ÷ 4 = 4
20 ÷ 4 = 5
24 ÷ 4 = 6
28 ÷ 4 = 7
32 ÷ 4 = 8
36 ÷ 4 = 9
40 ÷ 4 = 10
DIVIDING A NUMBER BY 4
Hint: Think Multiplication!
3 x ? = _
4
DIVISION
4 ÷ 4 = 1
8 ÷ 4 = 2
12 ÷ 4 = 3
16 ÷ 4 = 4
20 ÷ 4 = 5
24 ÷ 4 = 6
28 ÷ 4 = 7
32 ÷ 4 = 8
36 ÷ 4 = 9
40 ÷ 4 = 10
DIVIDING A NUMBER BY 4
Hint: Think Multiplication!
3 x ? = _