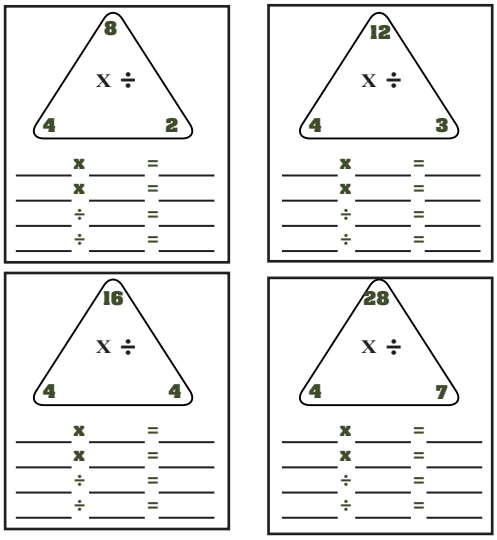
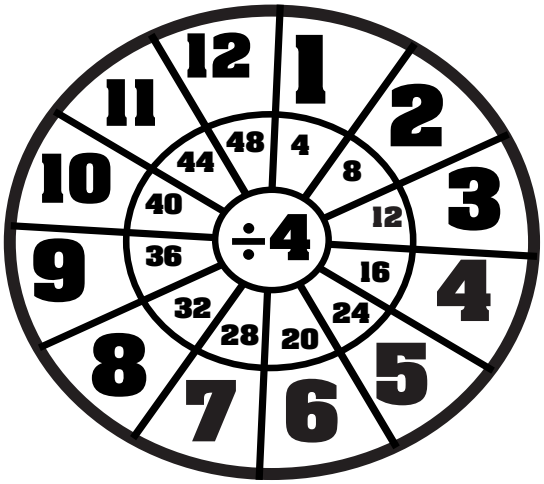
DIVIDING by 4

WORK BOOKLET

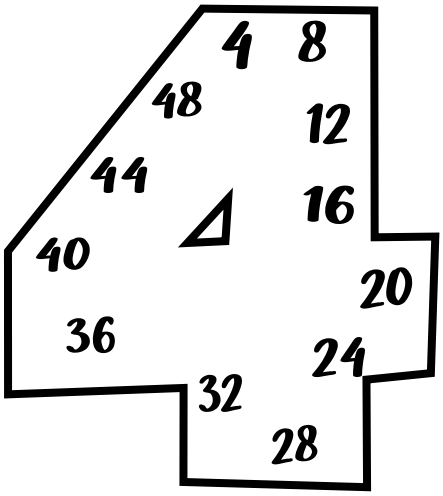
TRIANGLE FACT FAMILY



DIVISION WHEELS

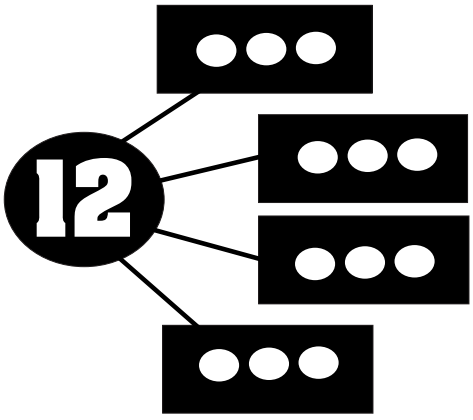


MULTIPLES OF 4



Division Strategies:

PARTITION

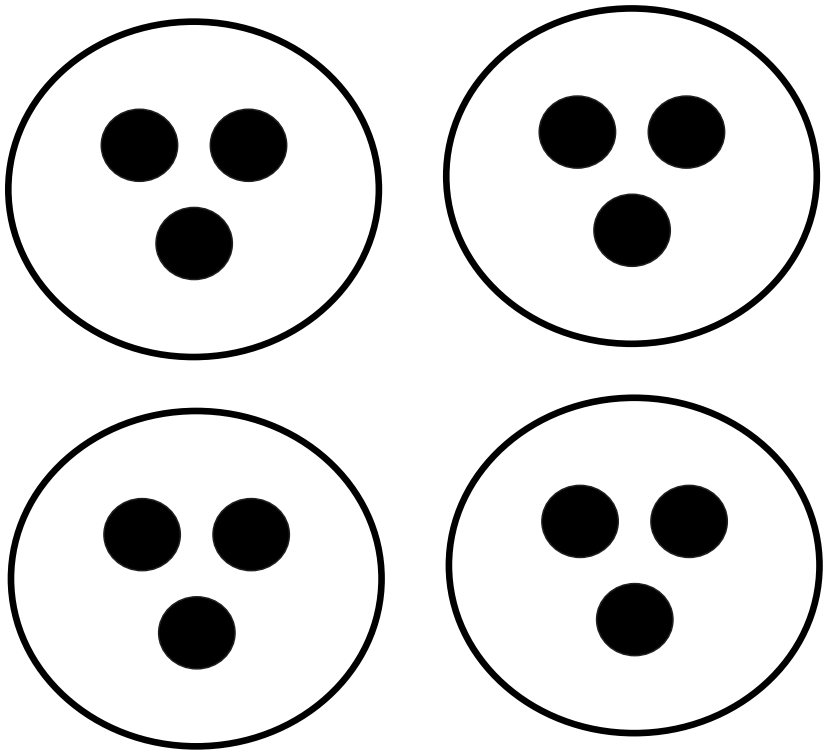


12 ÷ 4 = 3

STRATEGY POSTER

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

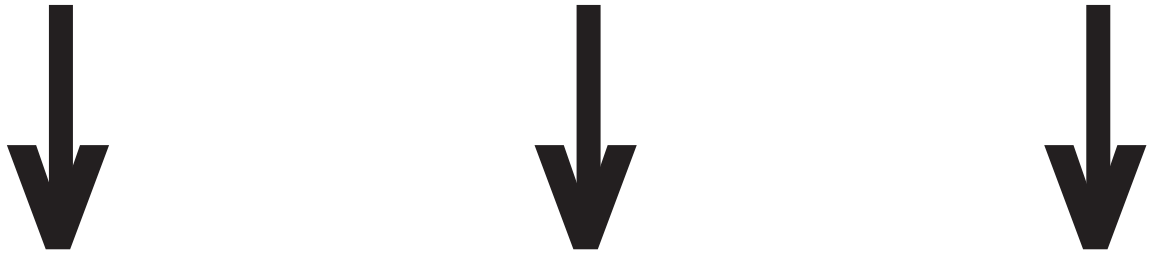
12 ÷ 4 = 3



Hint : think multiplication! 4 x ? = 12

DIVISION

$$16 \div 4 = 4$$



DIVIDEND DIVISOR QUOTIENT

MULTIPLES OF FOUR

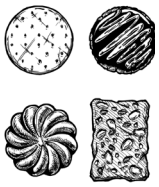
4  8  12 

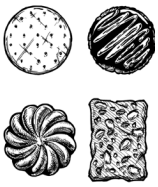
16  20  24 

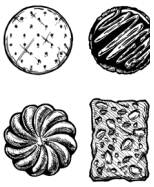
28  32  36 

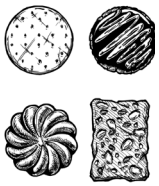
40  44  48 

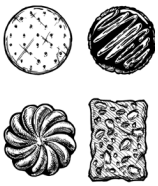
MULTIPLES OF FOUR

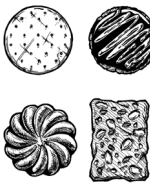
4 

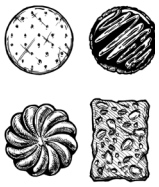
8 

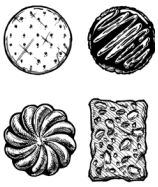
12 

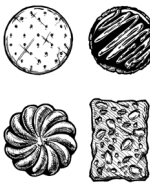
16 

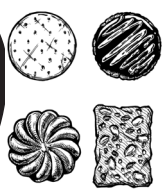
20 

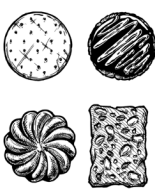
24 

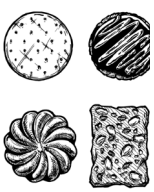
28 

32 

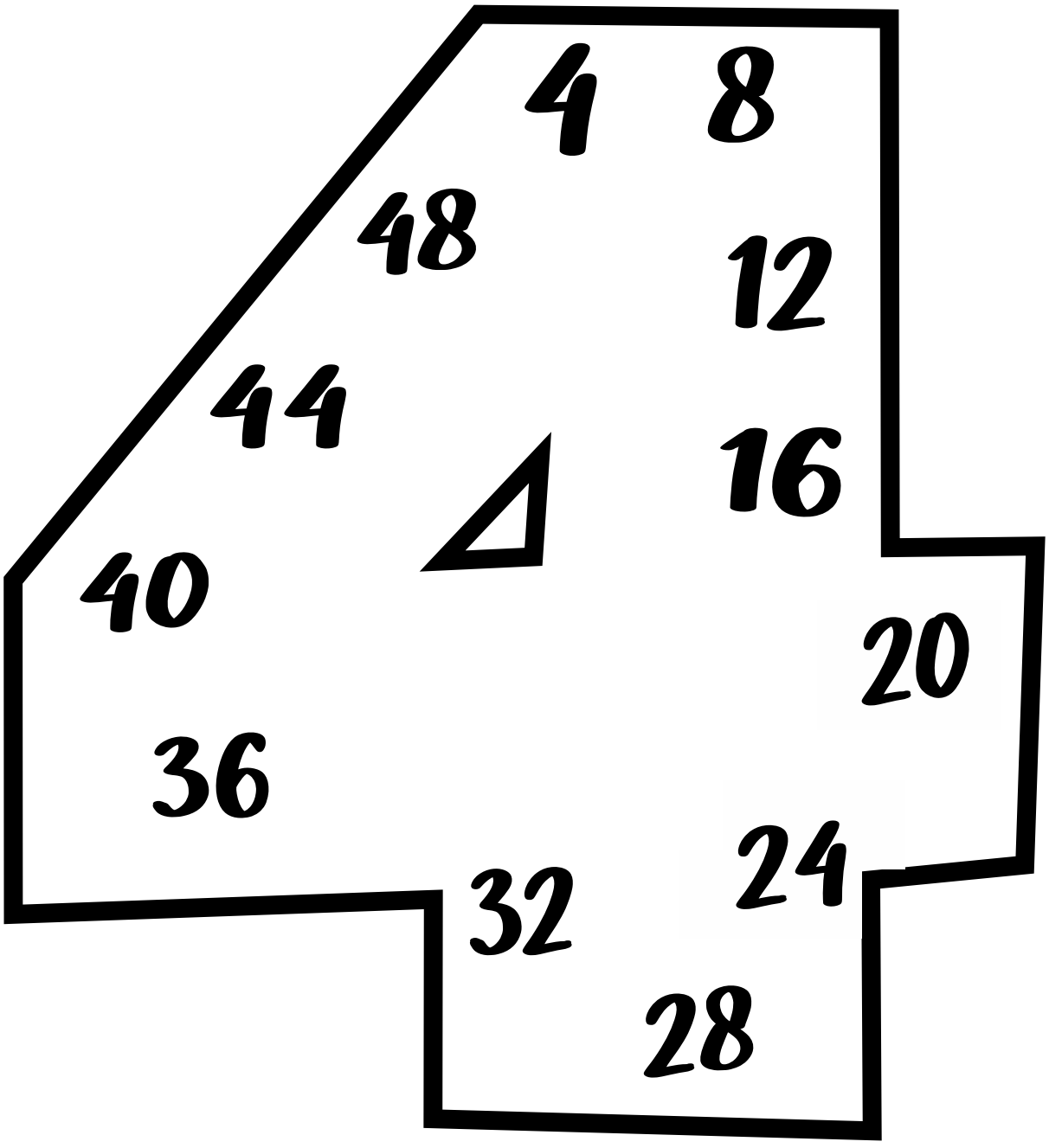
36 

40 

44 

48 

MULTIPLES OF 4

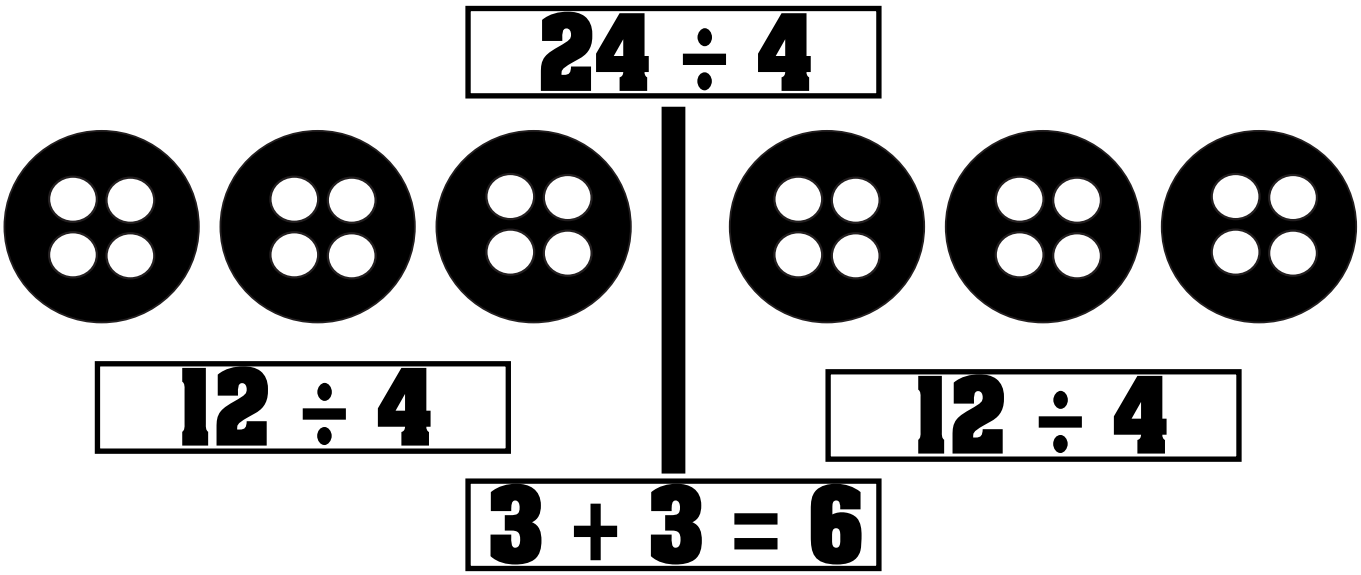


VOCABULARY

DISTRIBUTIVE PROPERTY

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

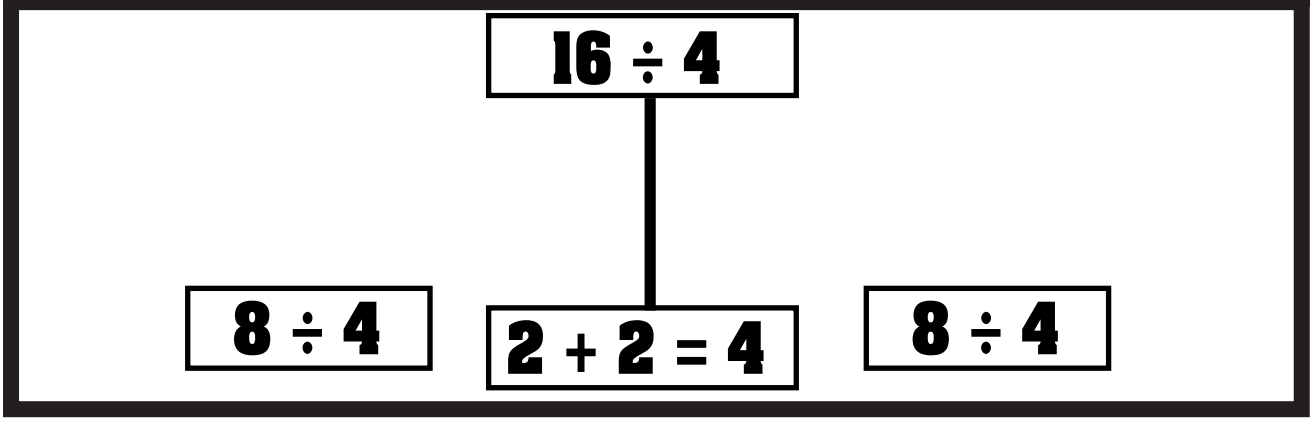
$$24 \div 4 = (12 \div 4) + (12 \div 4) = 4 + 4 = 8$$



MODEL THE FACT

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

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

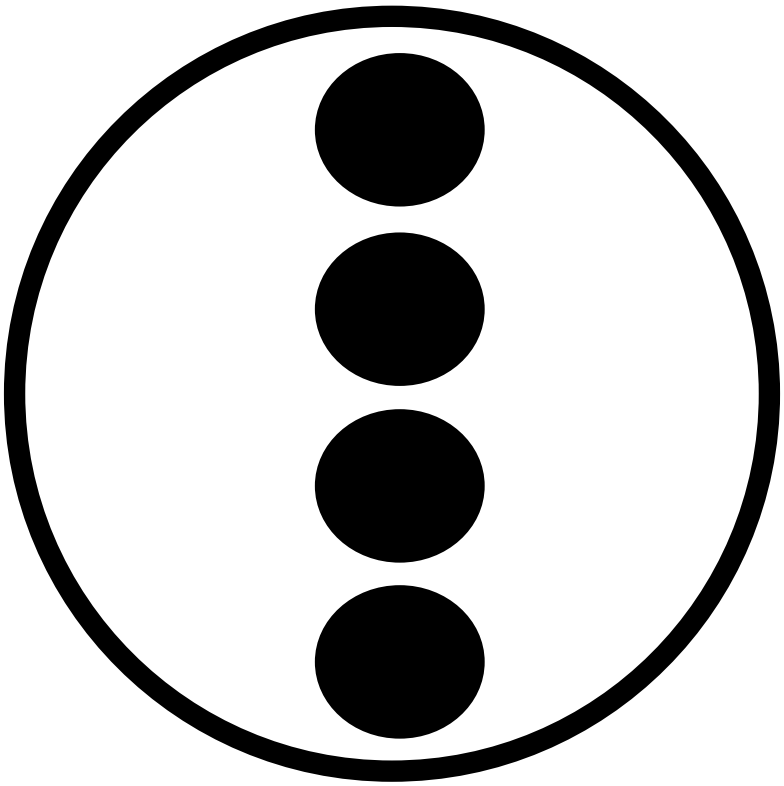


IDENTITY PROPERTY

DIVIDING A NUMBER BY 1

$$4 \div 1 = 4$$

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



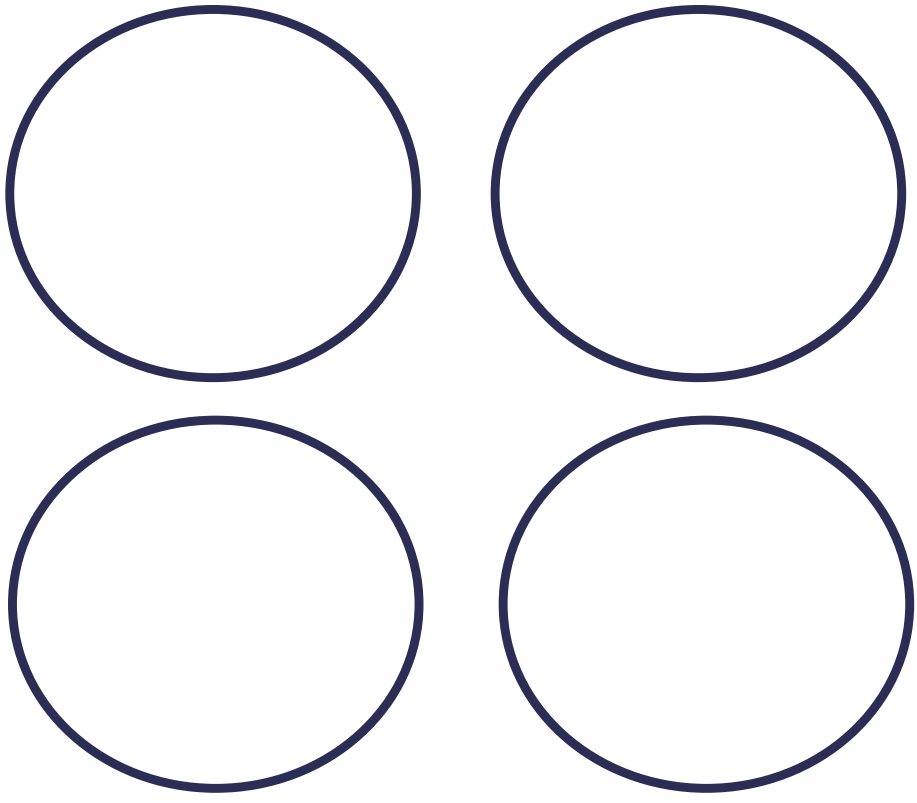
Hint : It's always the number when you divide by 1.

ZERO PROPERTY

DIVIDING 0 BY A NUMBER

$$0 \div 4 = 0$$

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



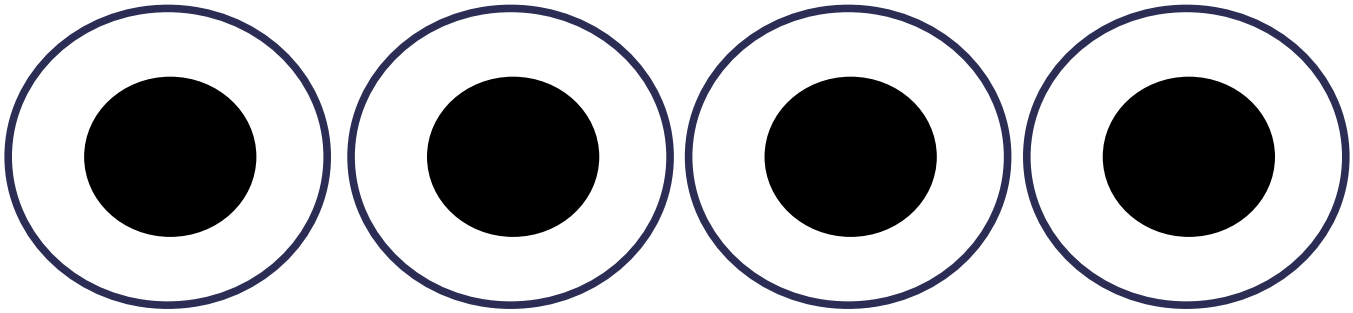
Hint : It's always 0 when you divide zero.

DIVISION BY ITSELF PROPERTY

DIVIDING A NUMBER BY ITSELF

$$4 \div 4 = 1$$

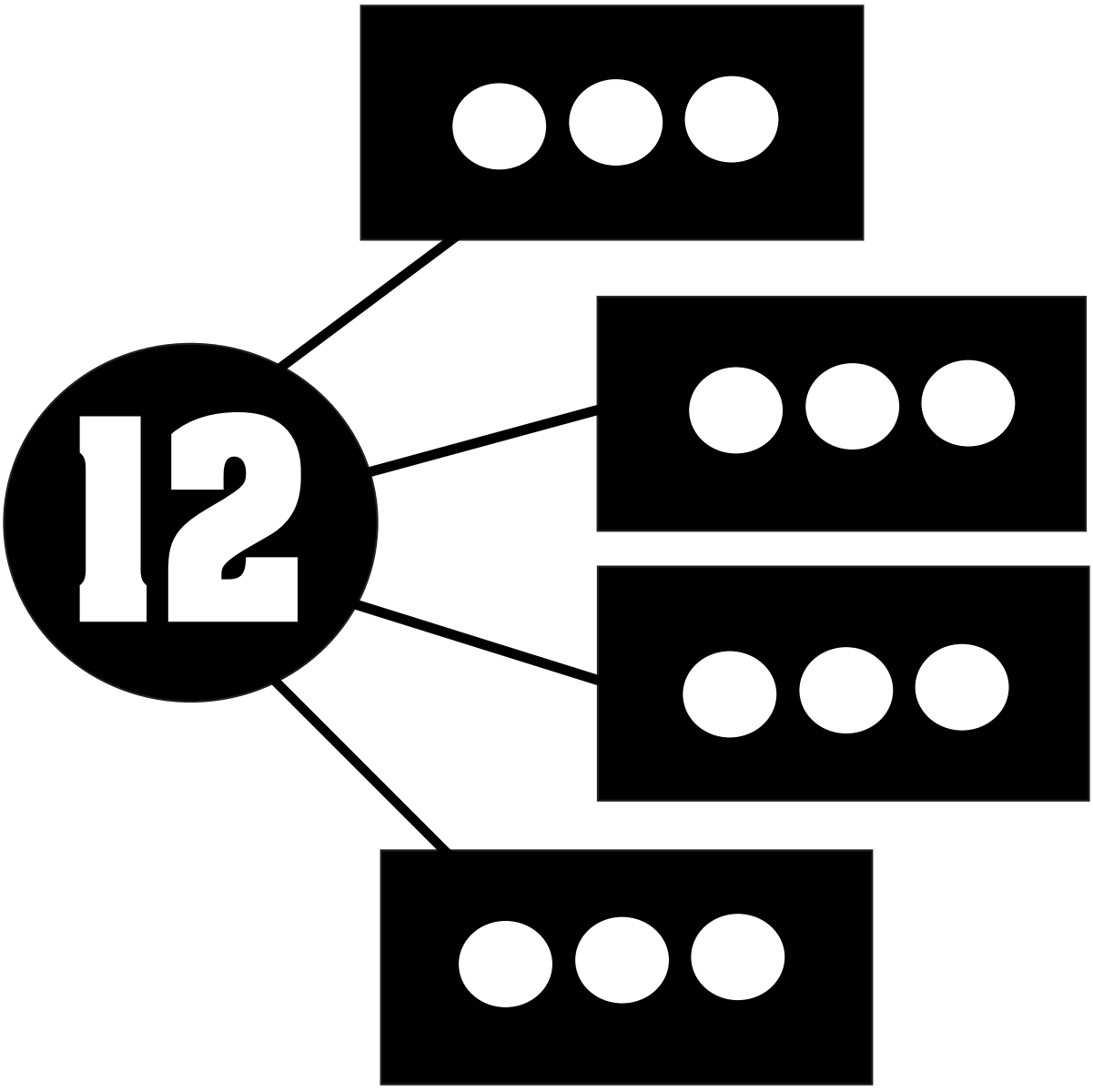
$3 \div 3$ $7 \div 7$ $8 \div 8$



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

Division Strategies:

PARTITION



12 ÷ 4 = 3

Division Strategies:

PARTITION

$4 \div 4 = 1$

$8 \div 4 = 2$

$12 \div 4 = 3$

Division Strategies:

PARTITION

$16 \div 4 = 4$

$20 \div 4 = 5$

$24 \div 4 = 6$

Division Strategies:

PARTITION

28 ÷ 4 = 7

32 ÷ 4 = 8

36 ÷ 4 = 9

Division Strategies:

PARTITION

$40 \div 4 = 10$

FREE CHOICE

FREE CHOICE

Division Strategies:

RELATED FACT

32 ÷ 4 = __

think

4 x __ = 32

4 ÷ 4 = __

think

4 x __ = 4

12 ÷ 4 = __

think

4 x __ = 12

36 ÷ 4 = __

think

4 x __ = 36

Division Strategies:

RELATED FACT

16 ÷ 4 = __

think

4 x __ = 16

28 ÷ 4 = __

think

4 x __ = 28

20 ÷ 4 = __

think

4 x __ = 20

24 ÷ 4 = __

think

4 x __ = 24

Division Strategies:

RELATED FACT

8 ÷ 4 = __

think

4 x __ = 8

36 ÷ 4 = __

think

4 x __ = 36

__ ÷ __ = __

think

__ x __ = __

__ ÷ __ = __

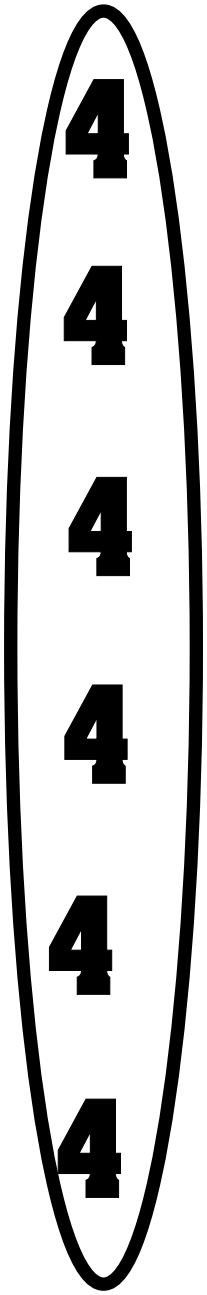
think

__ 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 - ___ = 20

___ - 4 = 16

___ - 4 = 12

___

12 - ___ = 8

8 - ___ = 4

___

___ - 4 = 0

24 ÷ 4 = ☐

Division Strategies:

REPEATED SUBTRACTION

28 ÷ 4 = ?

28 - ___ = 24

24 - ___ = 20

___ - 4 = 16

___ - 4 = 12

___ - 4 = 8

8 - ___ = 4

___ - 4 = 0

28 ÷ 4 = ☐

Division Strategies:

REPEATED SUBTRACTION

20 ÷ 4 = ?

__ - 4 = 16

__ - 4 = 12

__

12 - __ = 8

8 - __ = 4

__ - 4 = 0

__

20 ÷ 4 = ☐

Division Strategies:

REPEATED SUBTRACTION

$32 \div 4 = ?$

$32 - \_\_ = 28$

$28 - \_\_ = 24$

$24 - \_\_ = 20$

$\_\_ - 4 = 16$

$\_\_ - 4 = 12$

$12 - \_\_ = 8$

$8 - \_\_ = 4$

$\_\_ - 4 = 0$

$32 \div 4 = \square$

Division Strategies:

REPEATED SUBTRACTION

$$40 \div 4 = ?$$

$$40 - \_\_ = 36$$

$$36 - \_\_ = 32$$

$$32 - \_\_ = 28$$

$$28 - \_\_ = 24$$

$$24 - \_\_ = 20$$

$$\_\_ - 4 = 16$$

$$\_\_ - 4 = 12$$

$$12 - \_\_ = 8$$

$$8 - \_\_ = 4$$

$$\_\_ - 4 = 0$$

$$40 \div 4 = \square$$

Modeling Division
SKIP COUNTING

DRAW ON A NUMBER LINE

4 8 12 16 20 24 28 32 36 40

4 ☐ 12 ☐ ☐ 24 28 32 ☐ 40

FILL IN THE MISSING NUMBERS

4		12		20		28			40

		12		20		28			40

Modeling Division
SKIP COUNTING

FILL IN THE MISSING NUMBERS

	8			20			32	36	

FILL IN THE MISSING NUMBERS

4			16		24	28			40

FILL IN THE MISSING NUMBERS

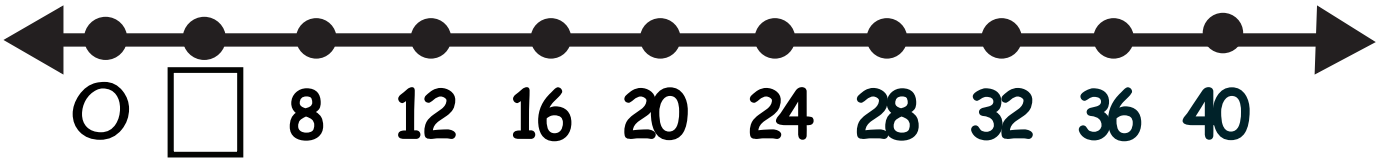
		12	16				32	36	40

FILL IN THE MISSING NUMBERS

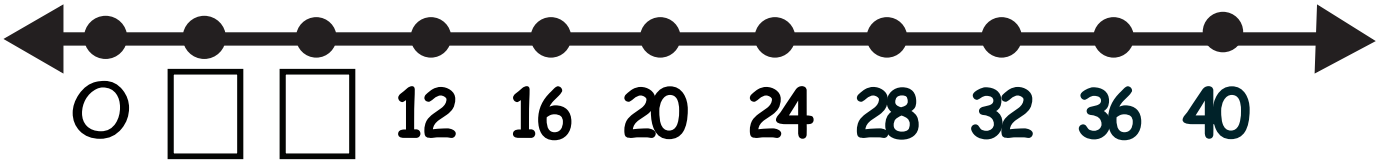
	8			20	24	28			40

Division Strategies:
SKIP COUNTING

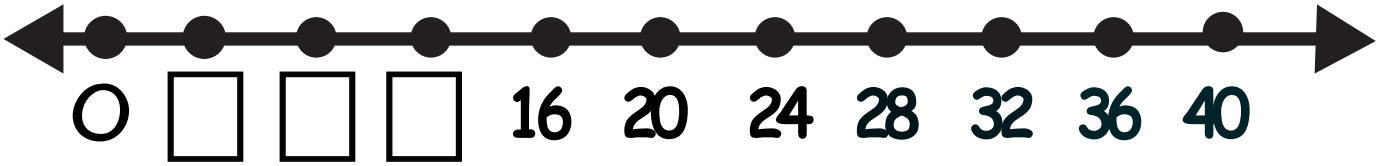
MODEL 4 ÷ 4 ON THE NUMBER LINE.



MODEL 8 ÷ 4 ON THE NUMBER LINE.

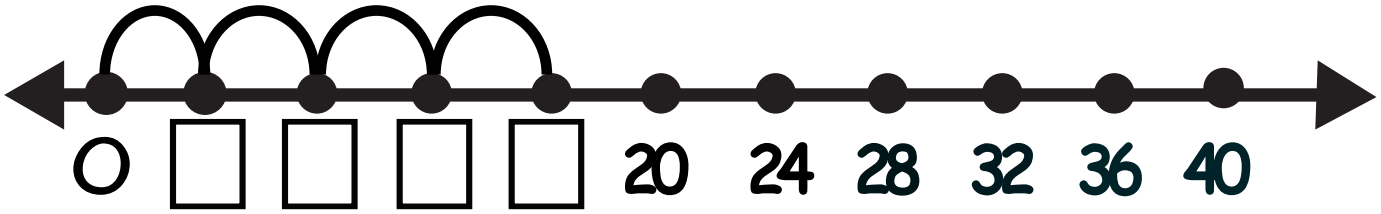


MODEL 12 ÷ 4 ON THE NUMBER LINE.

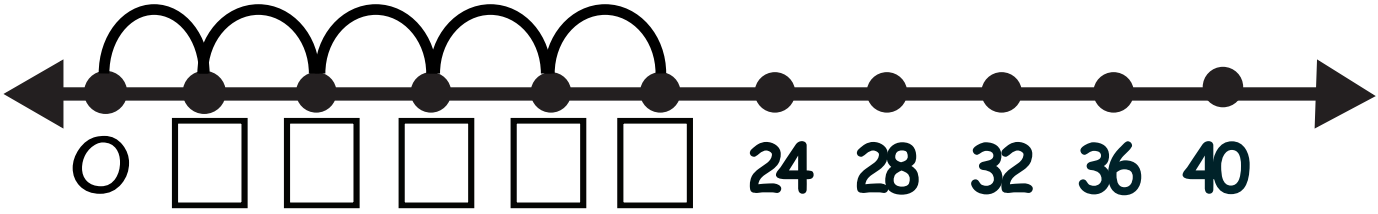


Division Strategies:
SKIP COUNTING

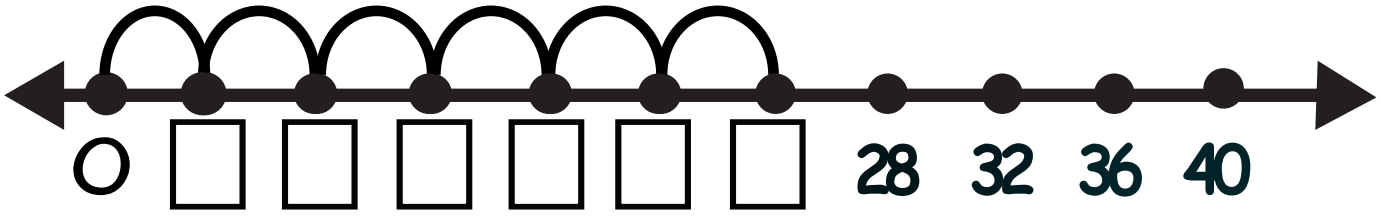
MODEL 16 ÷ 4 ON THE NUMBER LINE.



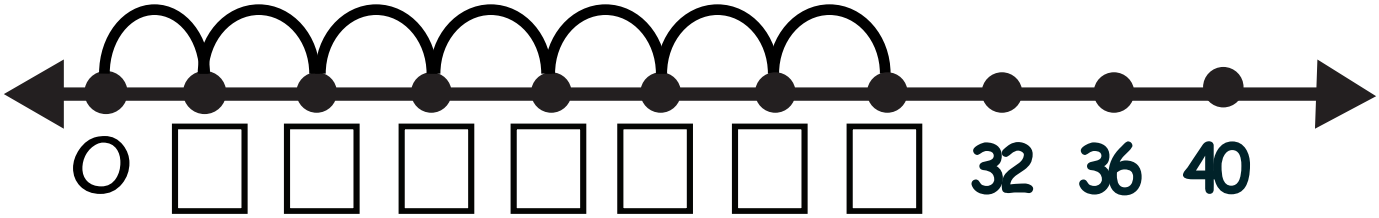
MODEL 20 ÷ 4 ON THE NUMBER LINE.



MODEL 24 ÷ 4 ON THE NUMBER LINE.

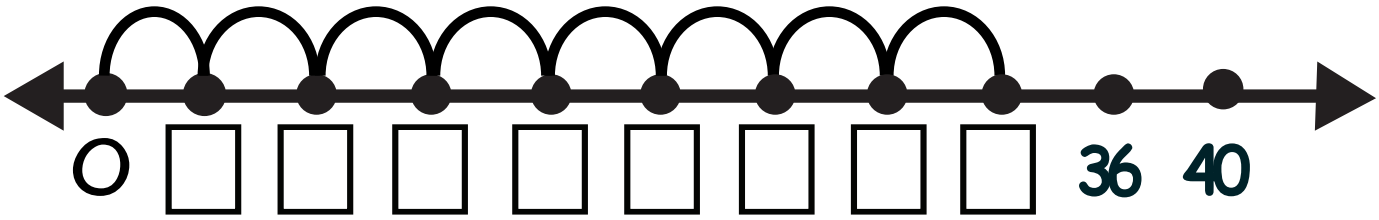


MODEL 28 ÷ 4 ON THE NUMBER LINE.

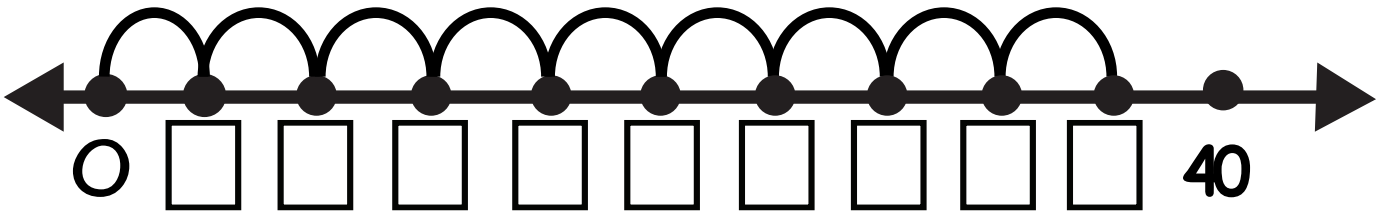


Division Strategies:
SKIP COUNTING

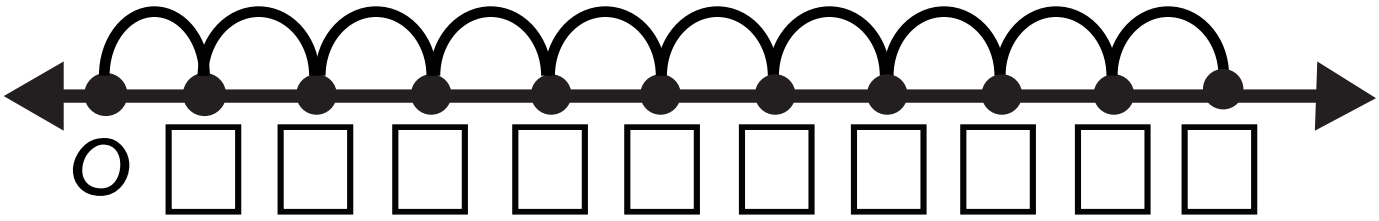
MODEL 32 ÷ 4 ON THE NUMBER LINE.



MODEL 36 ÷ 4 ON THE NUMBER LINE.



MODEL 40 ÷ 4 ON THE NUMBER LINE.

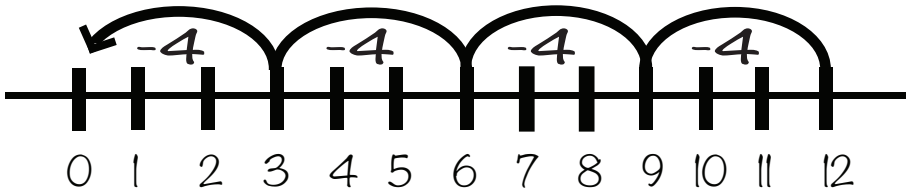


Division Strategies:

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

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

8 ÷ 4

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

12 ÷ 4

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

16 ÷ 4

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

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

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

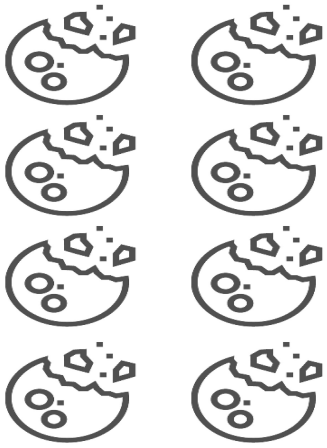
quotient

divisor

Array Flashcards

USE THE MODEL TO SOLVE

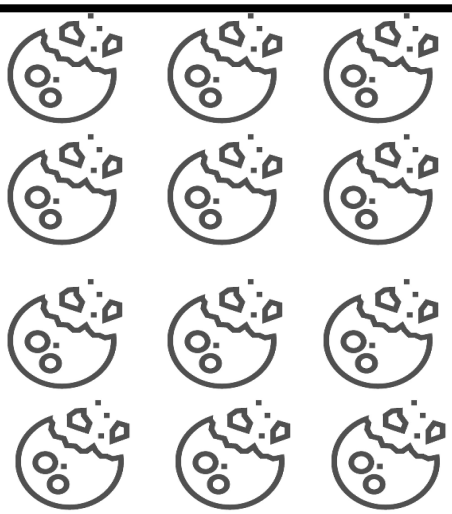
4 ÷ 4 = _____



8 ÷ 4 = ____

Array Flashcards

USE THE MODEL TO SOLVE



12 ÷ 4 = ___

16 ÷ 4 = ___

Array Flashcards

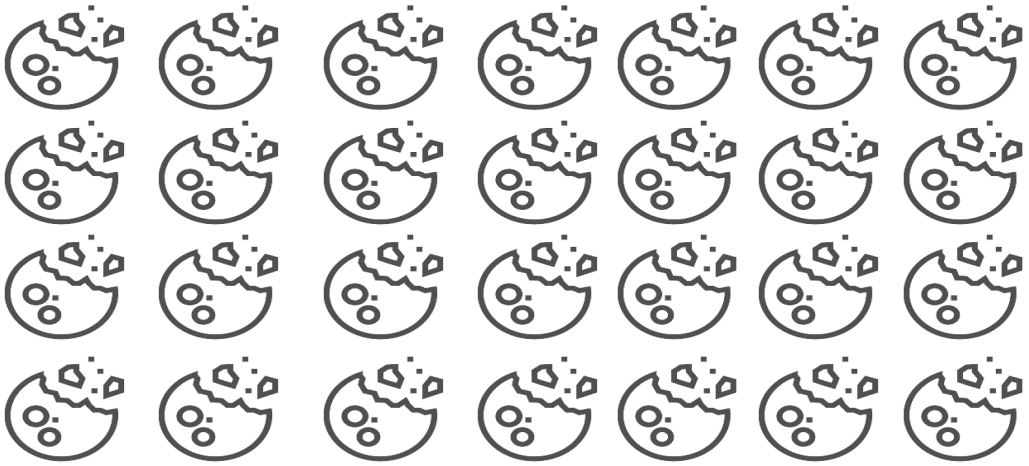
USE THE MODEL TO SOLVE

20 ÷ 4 =___

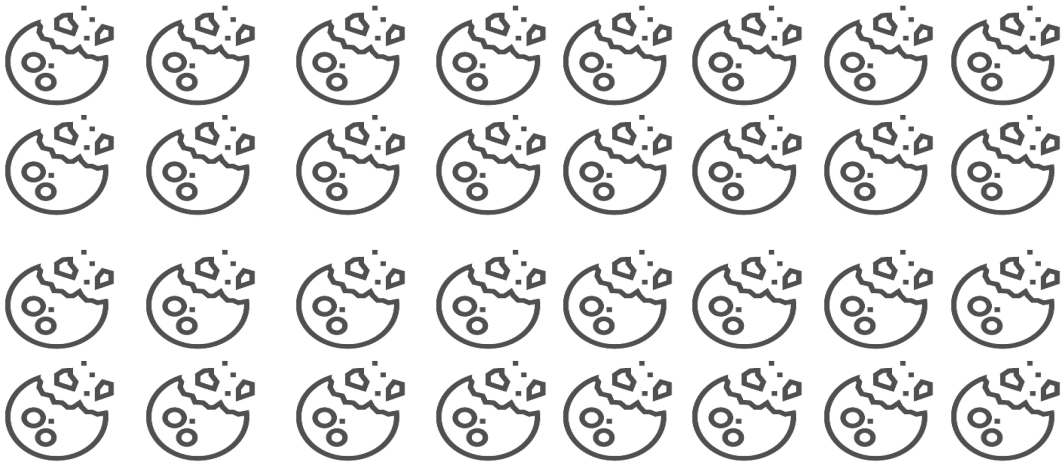
24 ÷ 4 =___

Array Flashcards

USE THE MODEL TO SOLVE



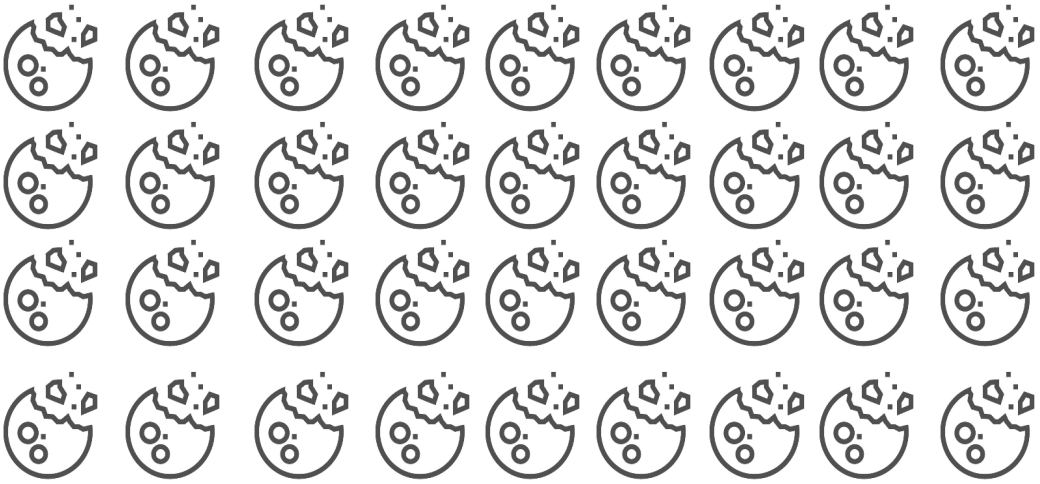
28 ÷ 4 = ___



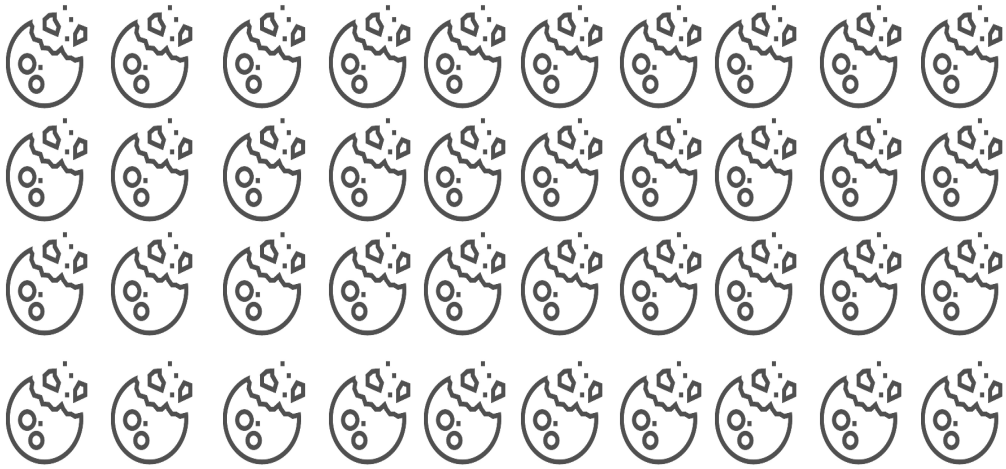
32 ÷ 4 = ___

Array Flashcards

USE THE MODEL TO SOLVE



36 ÷ 4 = ___



40 ÷ 4 = ___

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 = ___	8 ÷ 4 = ___
12 ÷ 4 = ___	16 ÷ 4 = ___
20 ÷ 4 = ___	24 ÷ 4 = ___

Equal Group Flashcards

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

28 ÷ 4 =___	32 ÷ 4 =___

36 ÷ 4 =___	40 ÷ 4 =___

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		

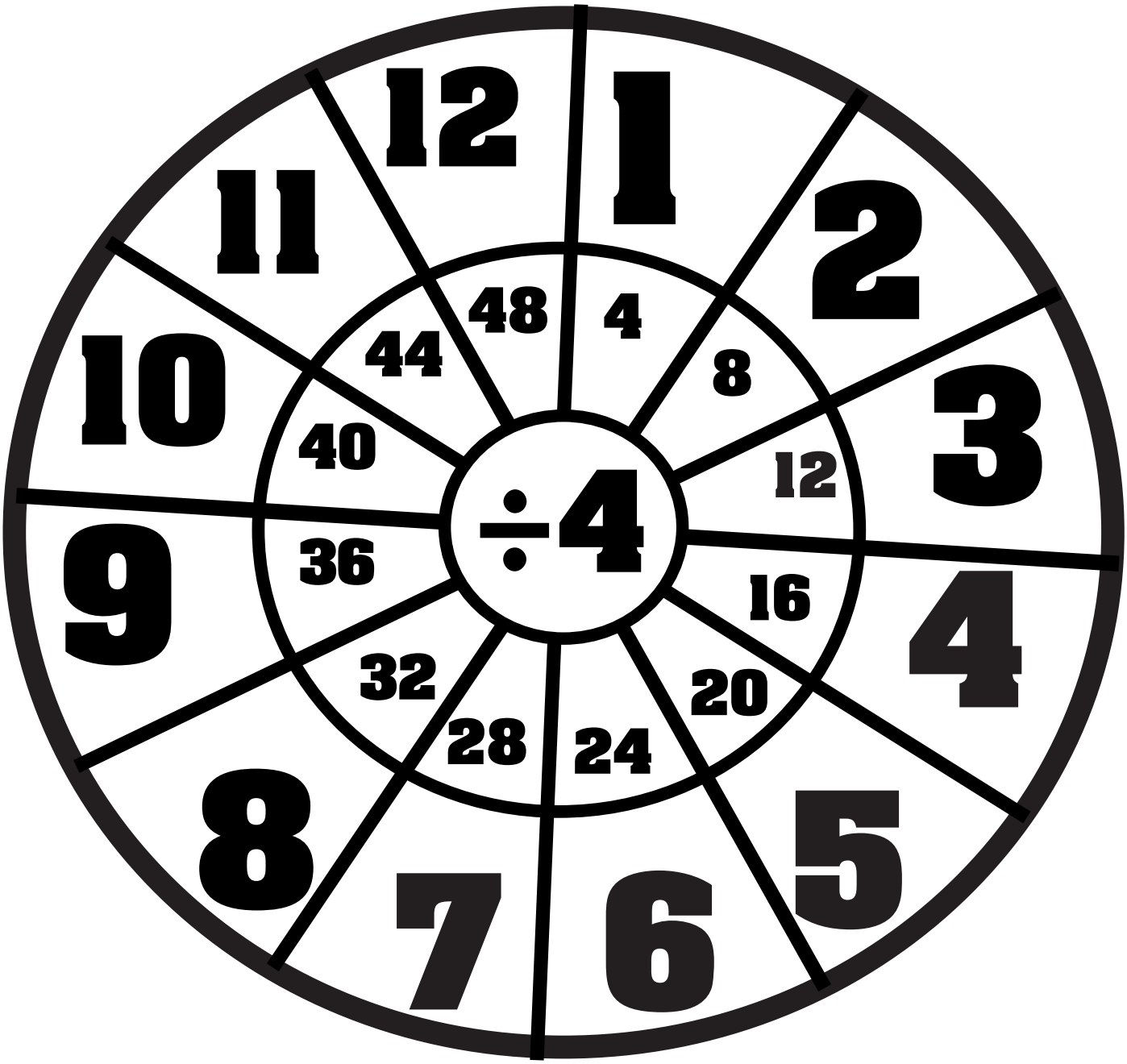
Dividing by 4
4 IN A ROW

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 = ?

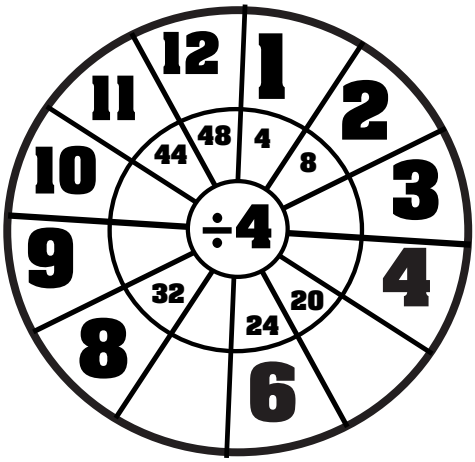
Instructions:

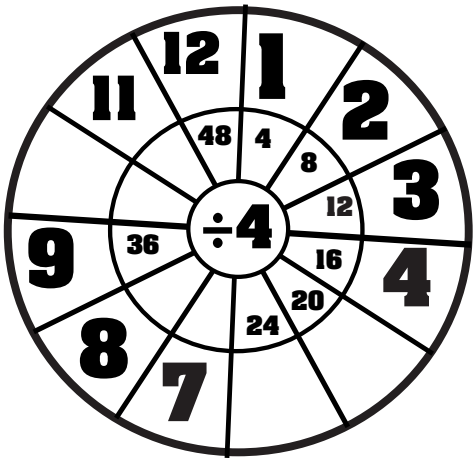
1. Each person pulls a card. Whoever has the largest number starts.
2. Take turns pulling a card and cover the expression that matches that quotient.
3. The first player to get 4 in a row wins!
4. Play again!

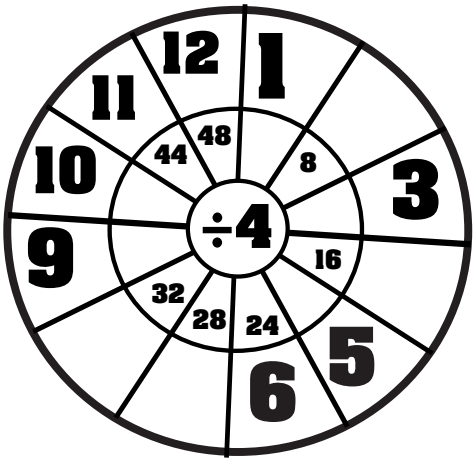
DIVISION WHEELS

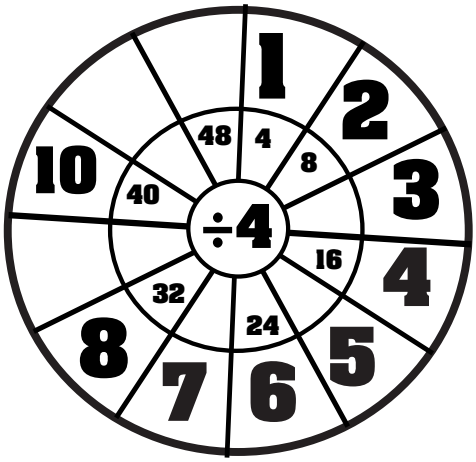


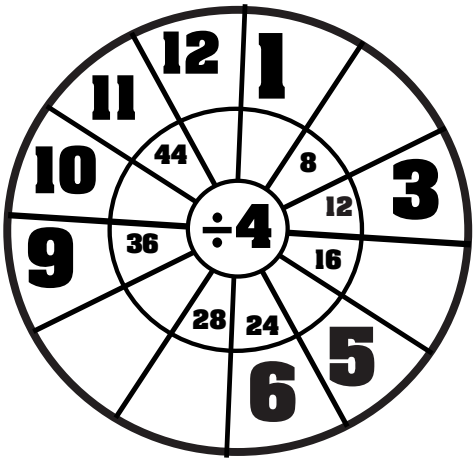
DIVISION WHEELS

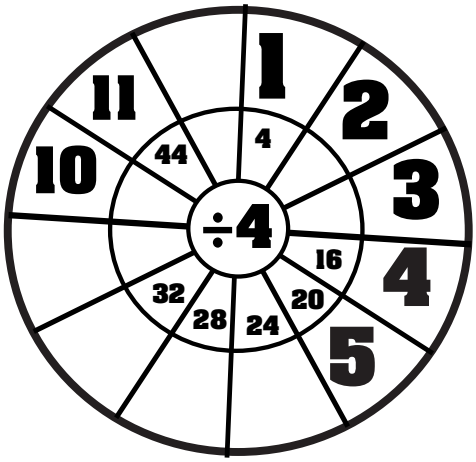












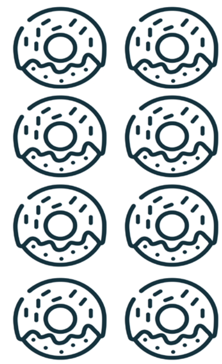
PICTURE FACT FAMILY

_______ x _______ = _______

_______ x _______ = _______

_______ ÷ _______ = _______

_______ ÷ _______ = _______

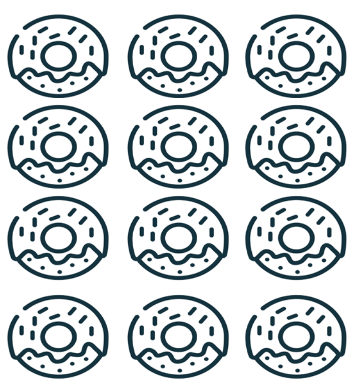


_______ x _______ = _______

_______ x _______ = _______

_______ ÷ _______ = _______

_______ ÷ _______ = _______



_______ x _______ = _______

_______ x _______ = _______

_______ ÷ _______ = _______

_______ ÷ _______ = _______

_______ x _______ = _______

_______ x _______ = _______

_______ ÷ _______ = _______

_______ ÷ _______ = _______

PICTURE FACT FAMILY

______ x ______ = ______

______ x ______ = ______

______ ÷ ______ = ______

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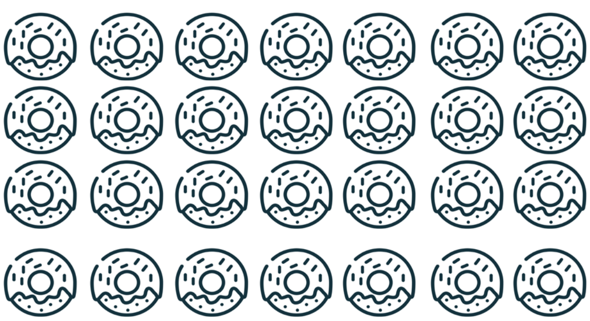
______ x ______ = ______

______ x ______ = ______

______ ÷ ______ = ______

______ ÷ ______ = ______



______ x ______ = ______

______ x ______ = ______

______ ÷ ______ = ______

______ ÷ ______ = ______

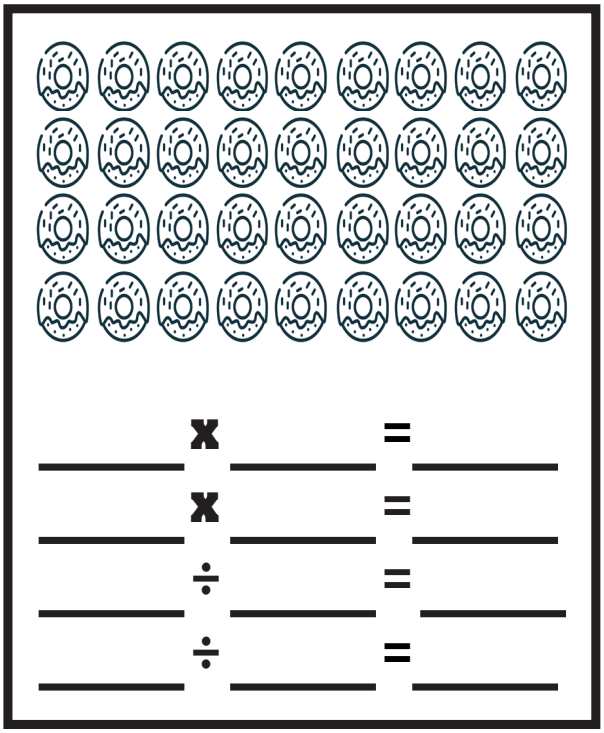
______ x ______ = ______

______ x ______ = ______

______ ÷ ______ = ______

______ ÷ ______ = ______

PICTURE FACT FAMILY



____ x ____ = ____

____ x ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____

MAKE YOUR OWN

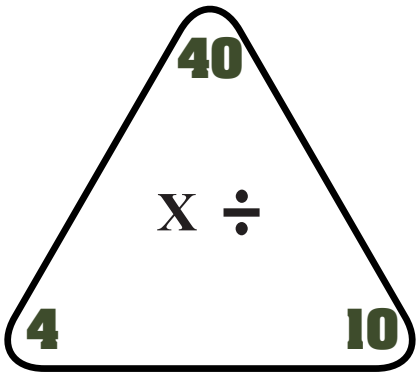
____ x ____ = ____

____ x ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____

TRIANGLE FACT FAMILY

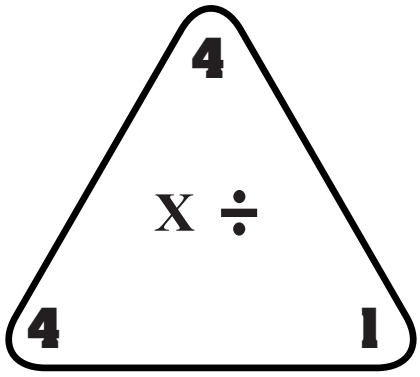


____ x ____ = ____

____ x ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____

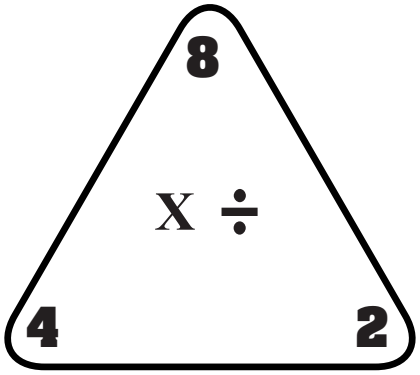


____ x ____ = ____

____ x ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____

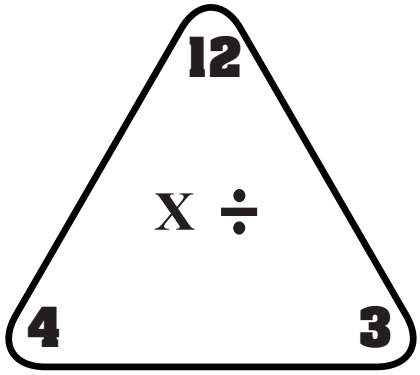


____ x ____ = ____

____ x ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____



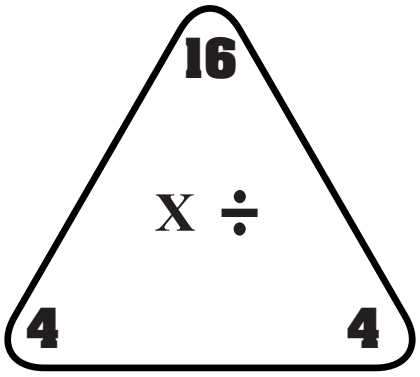
____ x ____ = ____

____ x ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____

TRIANGLE FACT FAMILY

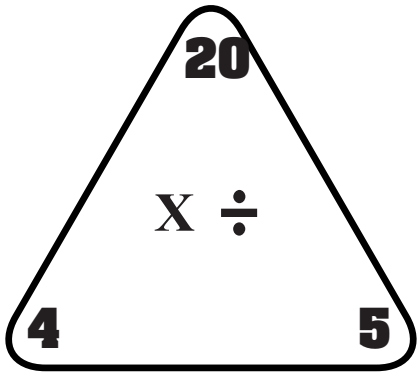


____ x ____ = ____

____ x ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____

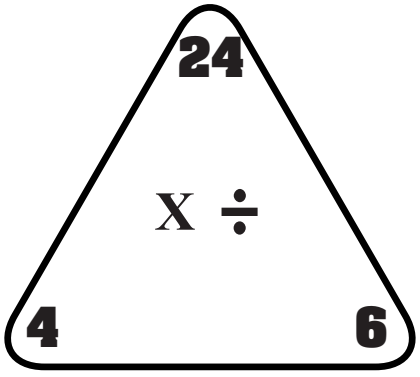


____ x ____ = ____

____ x ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____

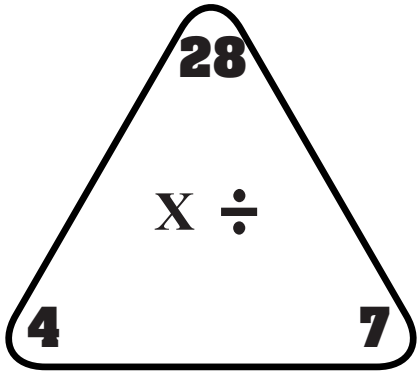


____ x ____ = ____

____ x ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____



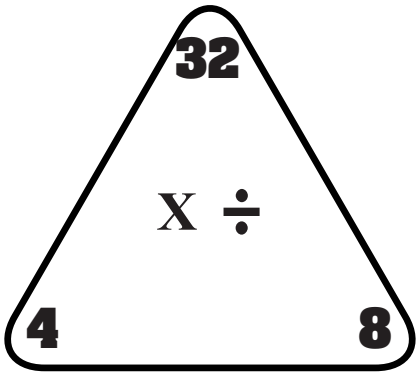
____ x ____ = ____

____ x ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____

TRIANGLE FACT FAMILY

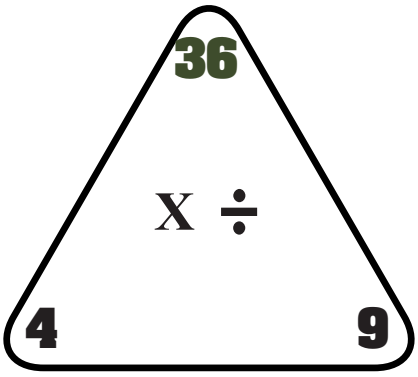


____ x ____ = ____

____ x ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____



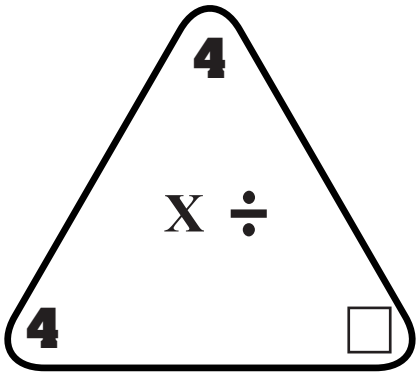
____ x ____ = ____

____ x ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____

TRIANGLE FACT FAMILY

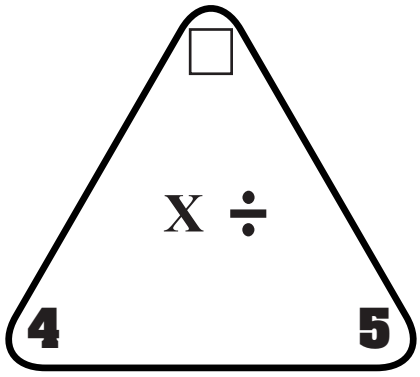


____ x ____ = ____

____ x ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____

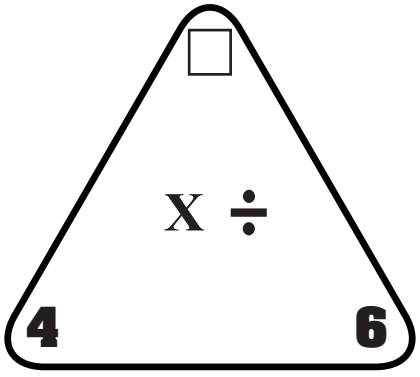


____ x ____ = ____

____ x ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____

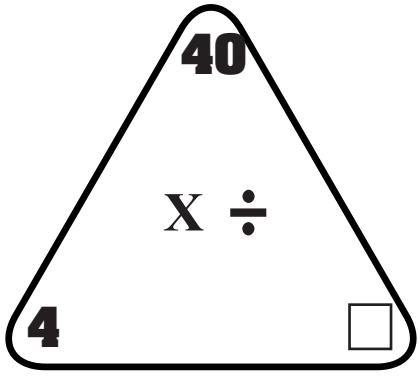


____ x ____ = ____

____ x ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____



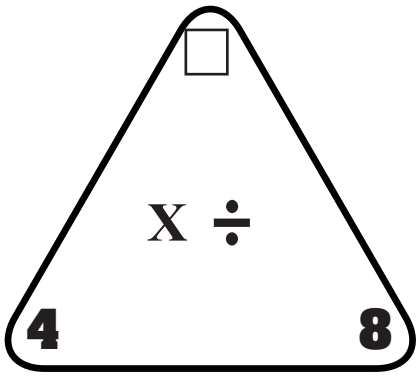
____ x ____ = ____

____ x ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____

TRIANGLE FACT FAMILY

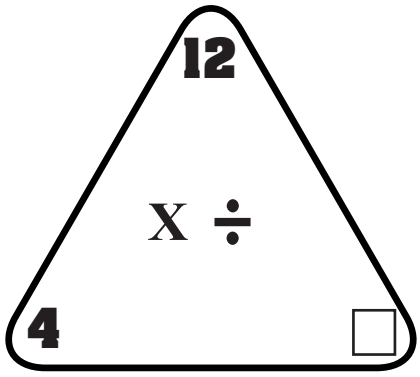


____ x ____ = ____

____ x ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____

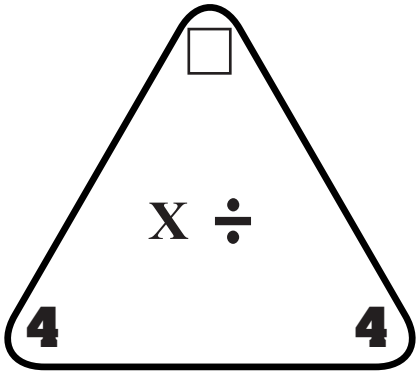


____ x ____ = ____

____ x ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____



____ x ____ = ____

____ x ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____

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?

_____ ÷ _____ = _____

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

_____ ÷ _____ = _____

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

_____ ÷ _____ = _____

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?

_____ ÷ _____ = _____

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!

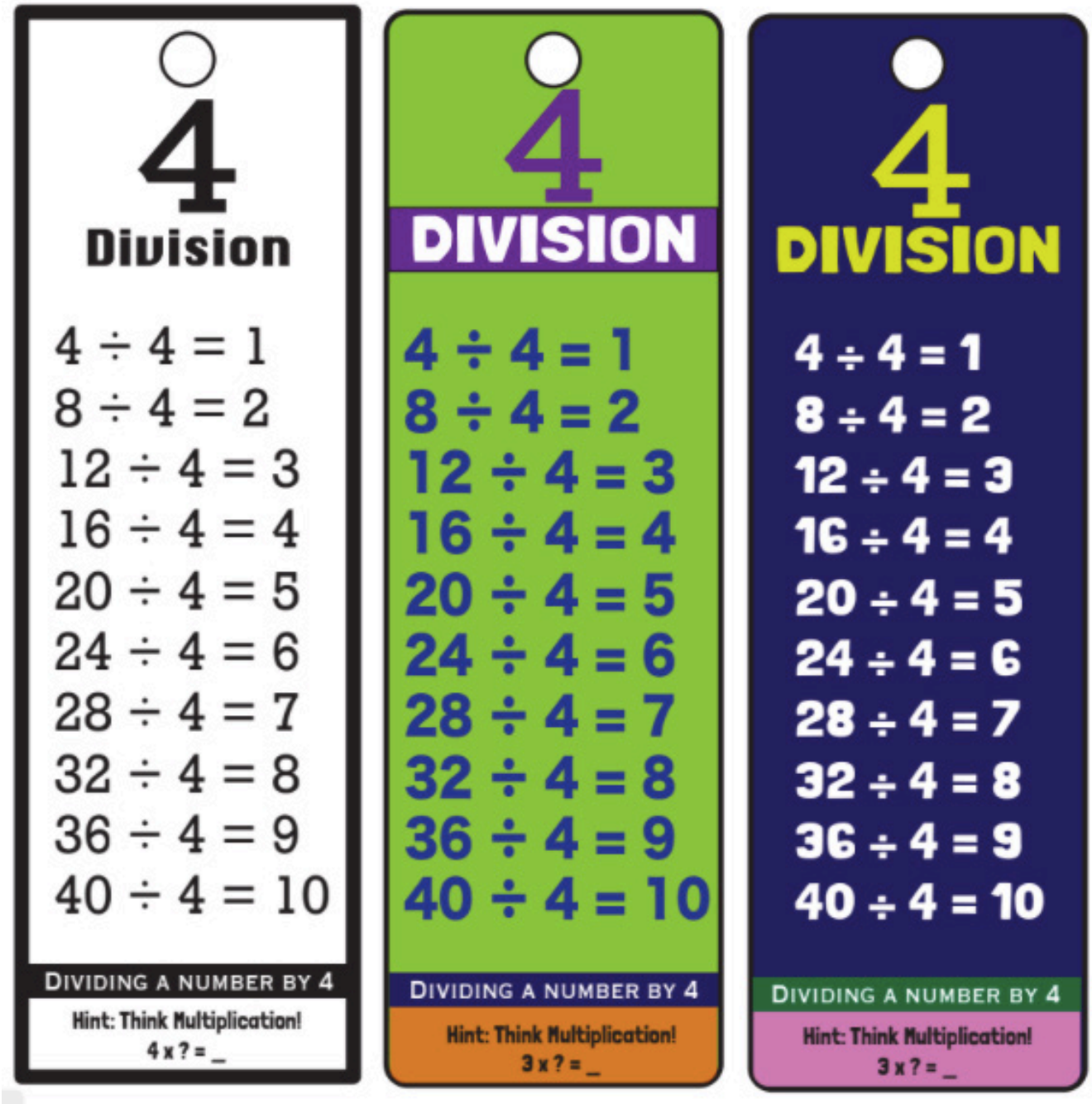
GREAT JOB!

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 ? = _