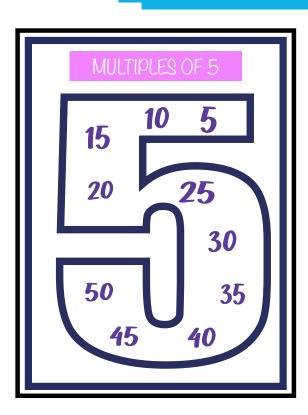
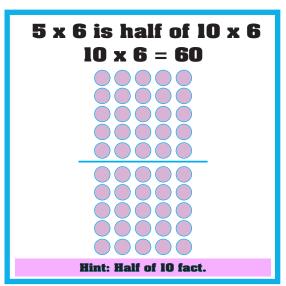
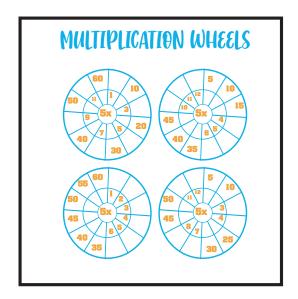
MULTIPLYING by

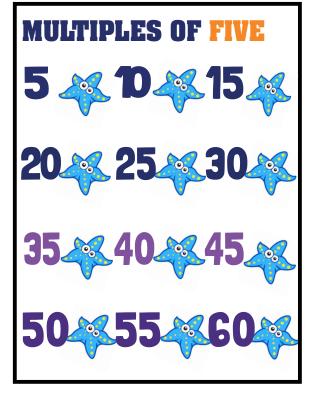


WORK BOOKLET







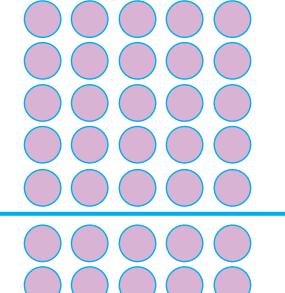


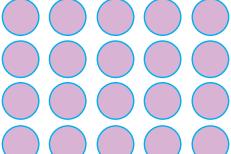
STRATEGY POSTER

When multiplying by 5

Half of 10 fact

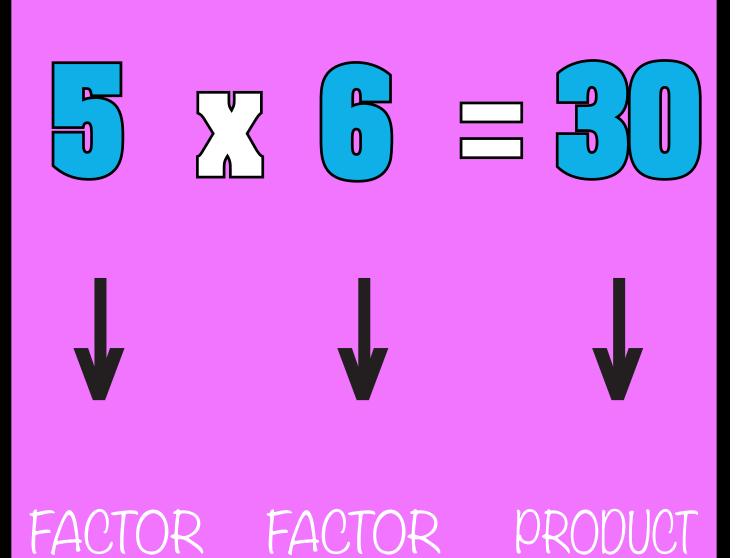
 5×6 is half of 10×6 $10 \times 6 = 60$





Hint: Half of 10 fact.

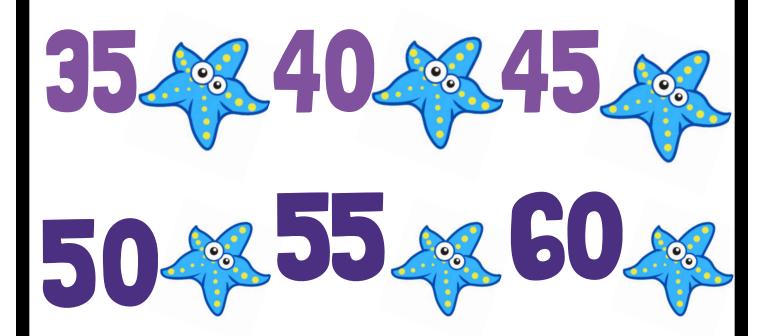
MULTIPLICATION



MULTIPLES OF FIVE



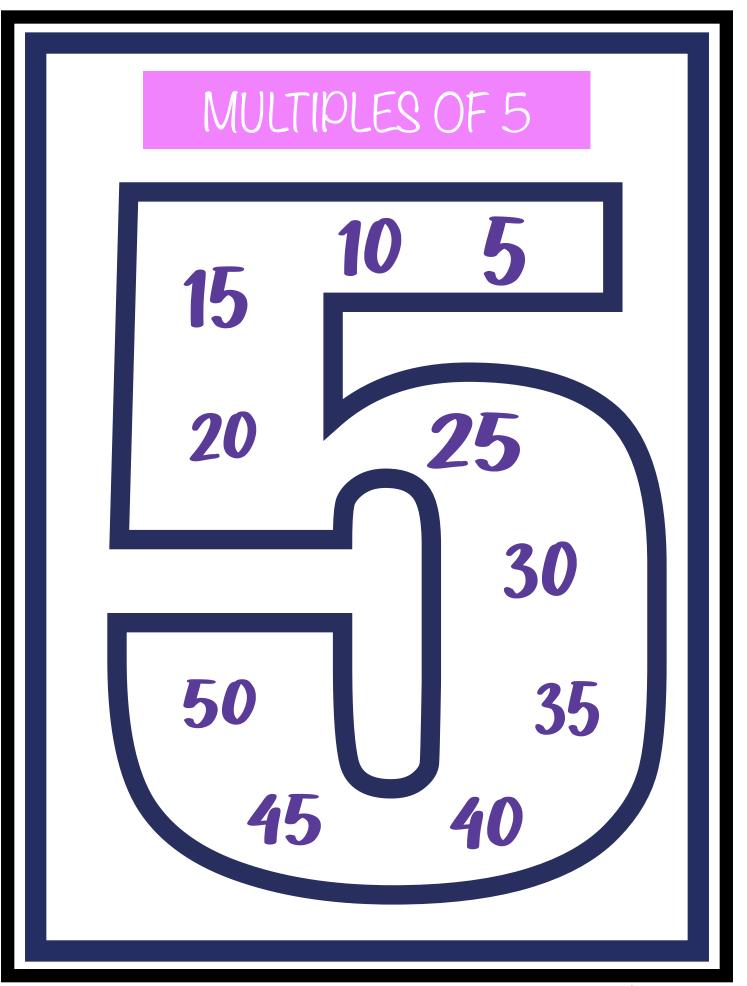




MULTIPLES OF FIVE 7 10 / 15 25 30 40/./45

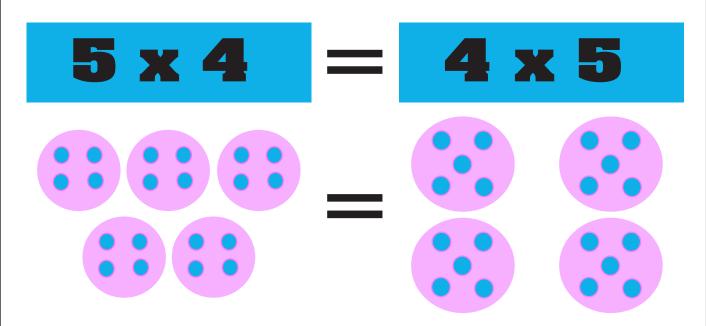
PICTURING THE MATH

GROUP THERE ARE 5 ARMS ON EACH STARFISH	COUNT BY SEQUENCE	MULTIPLICATION EQUATION
If you have 2 starfish, how many arms would you have?	5, 10	5 x 2 = 10
If you have 6 starfish, how many arms would you have?	5 , 10, 15, 20, 25, 3 0	5 x 6 = 30
If you have 8 starfish, how many arms would you have?		
If you have 4 starfish, how many arms would you have?		
If you have 10 starfish, how many arms would you have?		

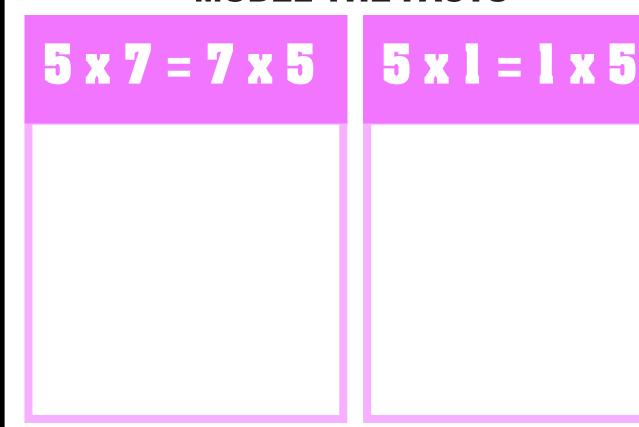


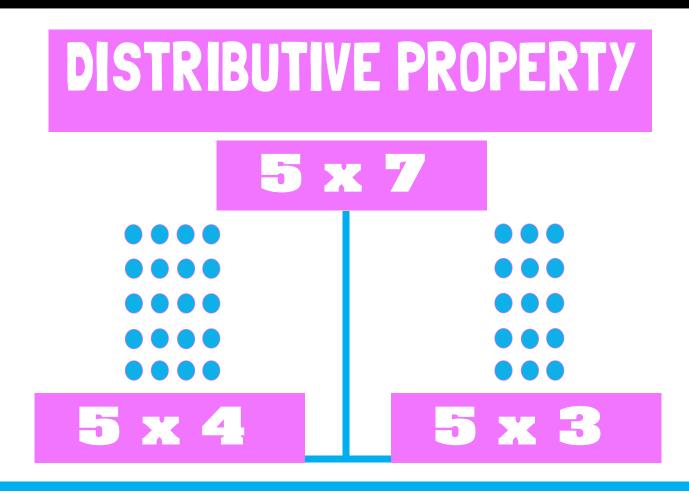


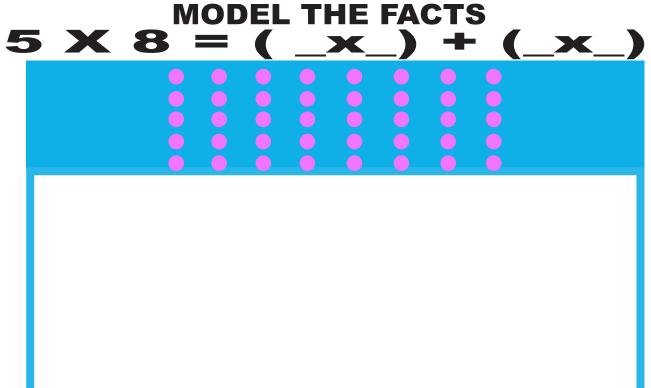
COMMUTATIVE PROPERTY



MODEL THE FACTS







There are other to ways to model this as well.

ASSOCIATIVE PROPERTY

5 x 3 x 2 5 x 6 or 3 x 10

MODEL THE FACTS

$$5 \times 1 \times 5 = _{X}_{=}$$
 $5 \times 5 \times 5 = _{X}_{=}$
 $5 \times 2 \times 5 = _{X}_{=}$

These are examples. There are other answers.

FREE CHOICE

X	X	=	X

ZERO PROPERTY

When you multiply by zero you get zero..

Zero groups of anything is zero

5 groups of 0 is 0

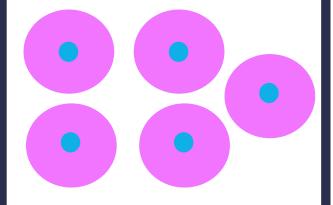
IDENTITY PROPERTY

When you multiply by 1... you get that number

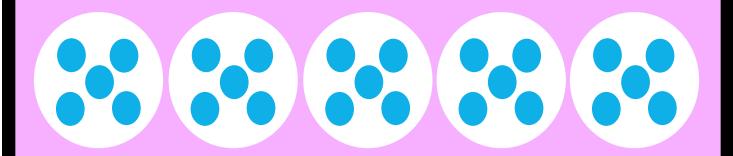
1 group of 5 is 5



5 groups of 1 is 5



Modeling Multiplication DRAW EQUAL GROUPS



5 X 5

5 X 1 5 X 2

5 X 3

5 X 4

Modeling Multiplication DRAW EQUAL GROUPS

5 X 5

5 X 6

5 X 7

5 X 8

5 X 9

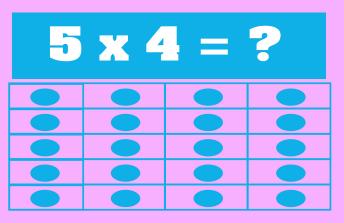
5 X 10

FREE CHOICE

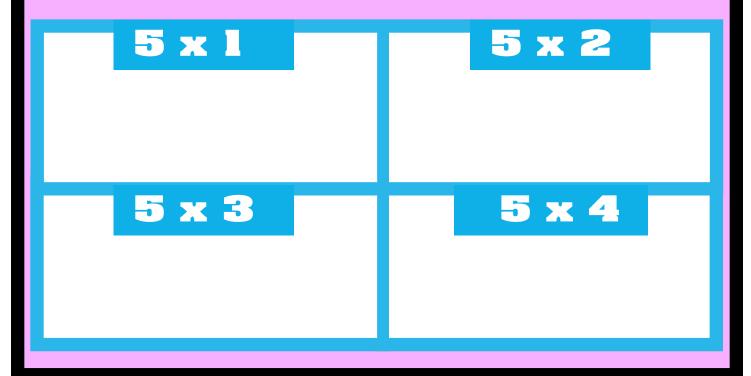
FREE CHOICE

Modeling Multiplication DRAW AN ARRAY

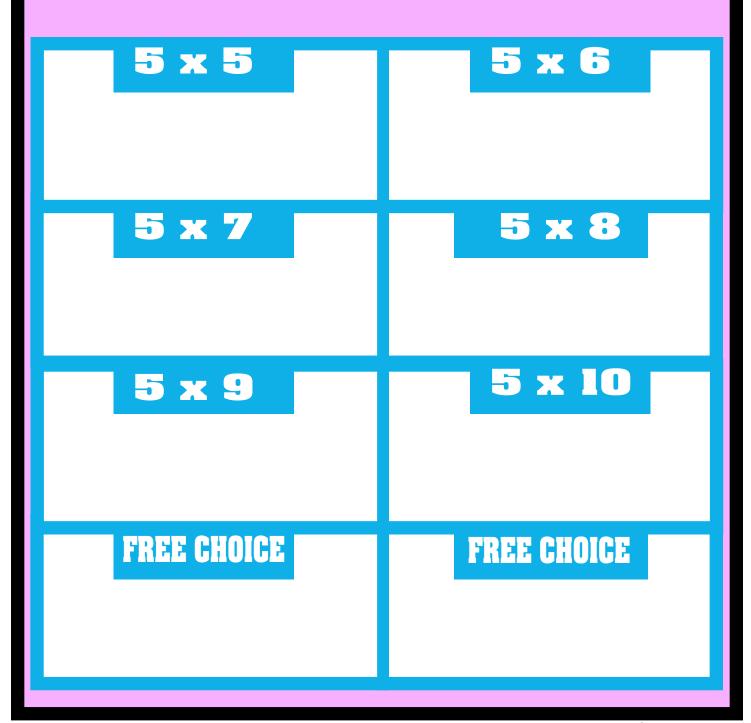
5 groups of 4



DRAW AN ARRAY



Modeling Multiplication DRAW AN ARRAY



Multiplication Strategies:

REPEATED ADDITION

5 groups of 5

5 + 5 + 5 + 5 + 5 = 25

 $5 \times 5 = 25$

MODEL THE REPEATED ADDITION SENTENCE

$$3+3+3+3+3$$

Multiplication Strategies: REPEATED ADDITION

$$5 \times 8 = 8 + 8 + 8 + 8$$

$$5 \times 10 = 10 + 10 + 10 + 10$$

FREE CHOICE

FREE CHOICE

Modeling Multiplication SKIP COUNTING

DRAW ON A NUMBER LINE





FILL IN THE MISSING NUMBERS





Modeling Multiplication SKIP COUNTING

FILL IN THE MISSING NUMBERS



Modeling Multiplication SKIP COUNTING

FILL IN THE MISSING NUMBERS. MODEL 5 x 1 ON THE NUMBER LINE.



FILL IN THE MISSING NUMBERS. MODEL 5 x 2 ON THE NUMBER LINE.



FILL IN THE MISSING NUMBERS. MODEL 5 x 3 ON THE NUMBER LINE.



Modeling Multiplication SKIP COUNTING

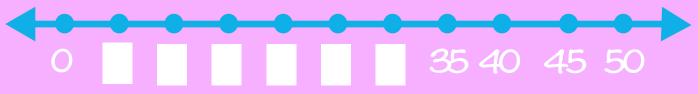
FILL IN THE MISSING NUMBERS. MODEL 5 x 4 ON THE NUMBER LINE.



FILL IN THE MISSING NUMBERS. MODEL 5 x 5 ON THE NUMBER LINE.



FILL IN THE MISSING NUMBERS. MODEL 5 x 6 ON THE NUMBER LINE.

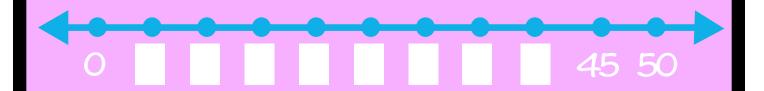


FILL IN THE MISSING NUMBERS. MODEL 5 x 7 ON THE NUMBER LINE.

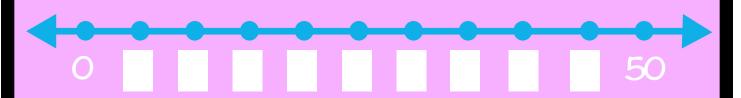


Modeling Multiplication SKIP COUNTING

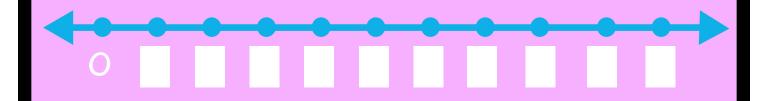
FILL IN THE MISSING NUMBERS. MODEL 5 x 8 ON THE NUMBER LINE.



FILL IN THE MISSING NUMBERS. MODEL 5 x 9 ON THE NUMBER LINE.

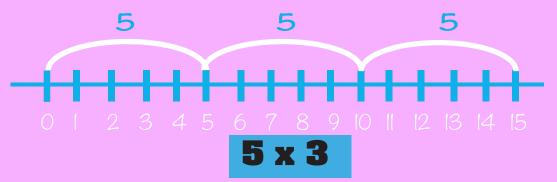


FILL IN THE MISSING NUMBERS. MODEL 5 x 10 ON THE NUMBER LINE.



Multiplication Strategies:

SKIP COUNTING ON THE NUMBER LINE



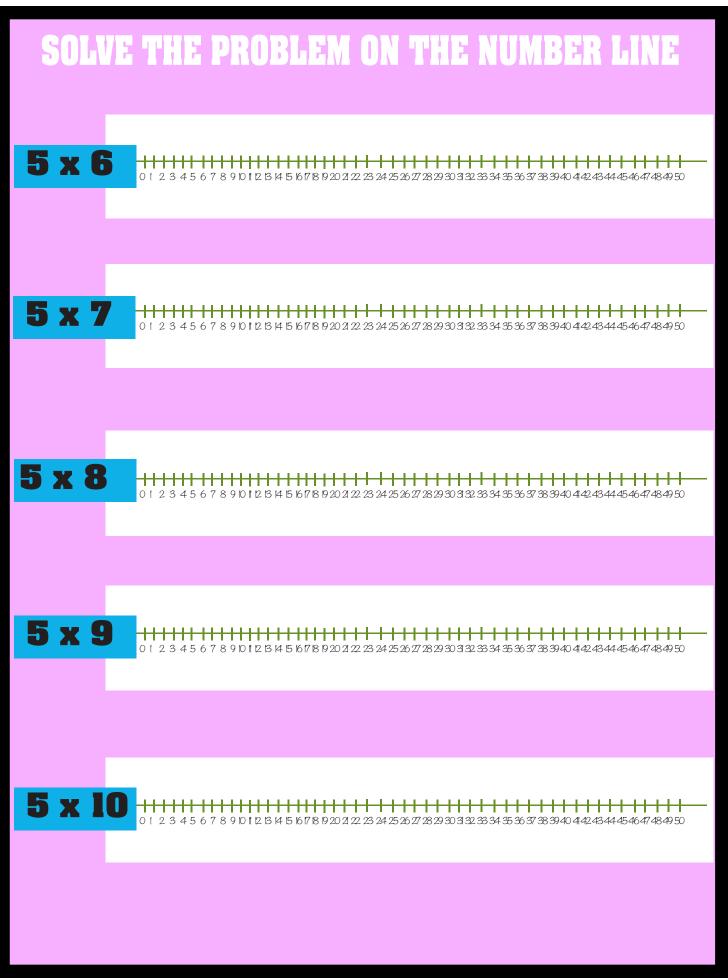
SOLVE THE PROBLEM ON THE NUMBER LINE



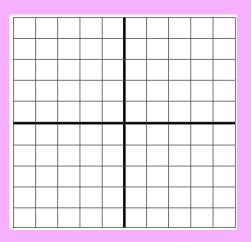




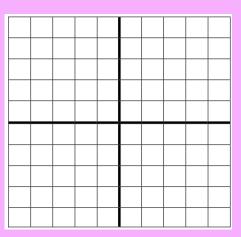




Array Flashcards MODEL THE PROBLEMS ON THE GRIDS.



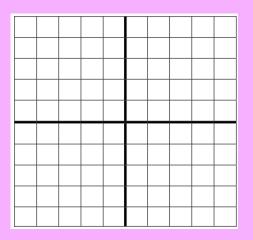




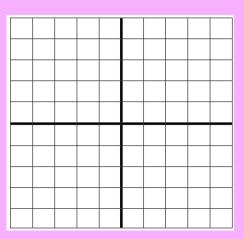
Array Flashcards

MODEL THE PROBLEMS ON THE GRIDS.





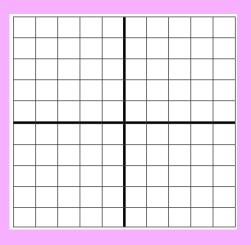




Array Flashcards MODEL THE PROBLEMS ON TH

MODEL THE PROBLEMS ON THE GRIDS.



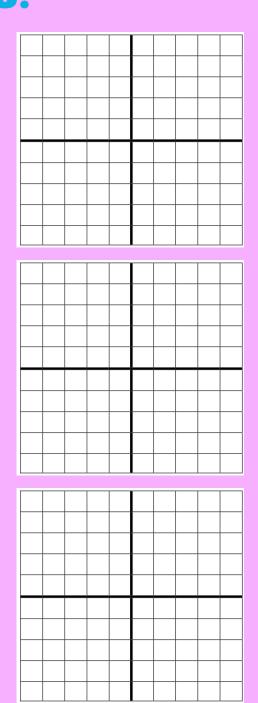


Array Flashcards MODEL THE PROBLEMS ON THE GRIDS.

5 x 10 = ___

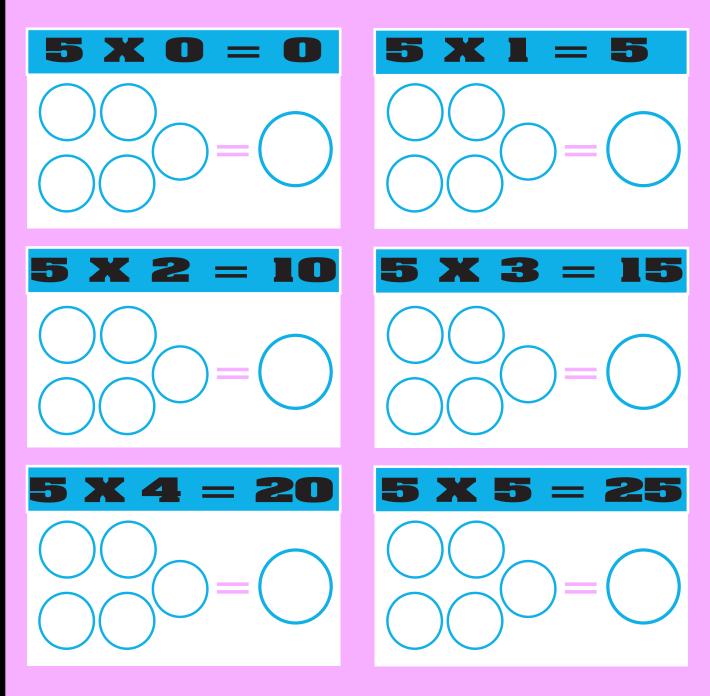
FREE CHOICE

FREE CHOICE



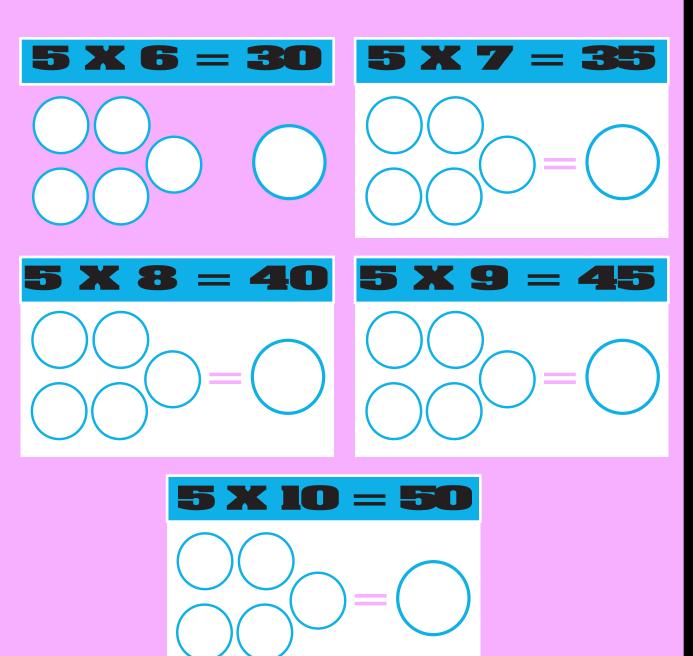
Equal Group Flashcards

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

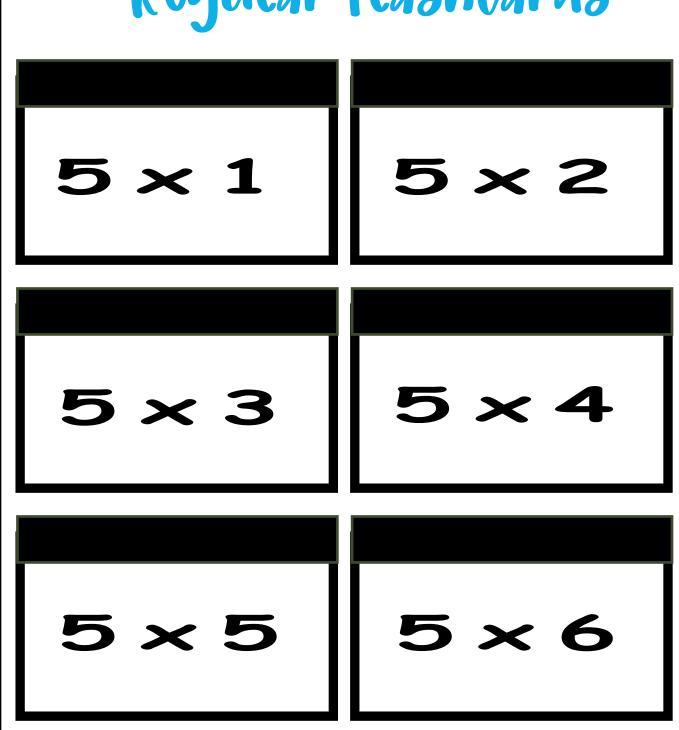


Equal Group Flashcards

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



Regular Flashcards



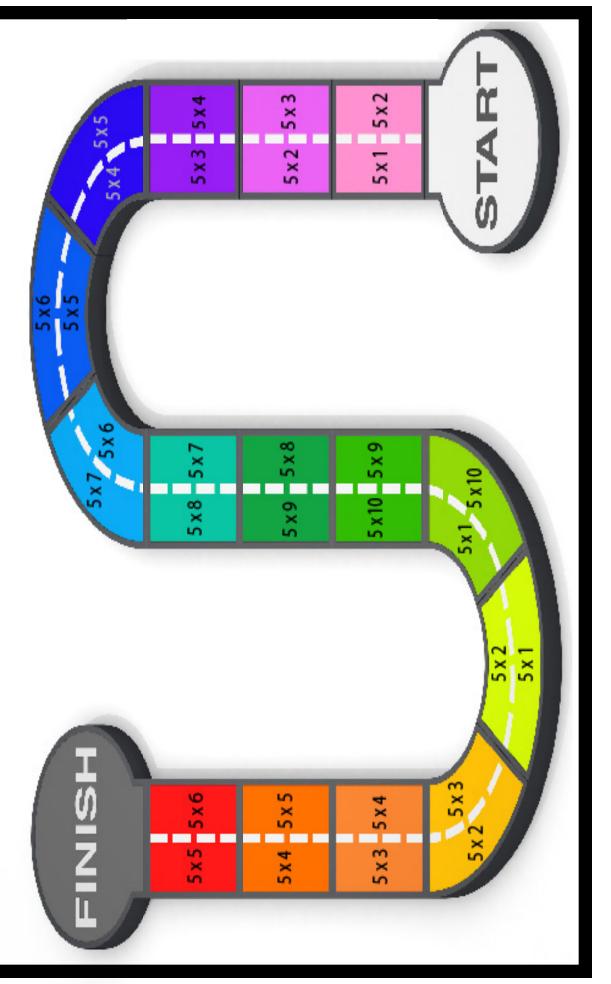
Regular Flashcards



5×10

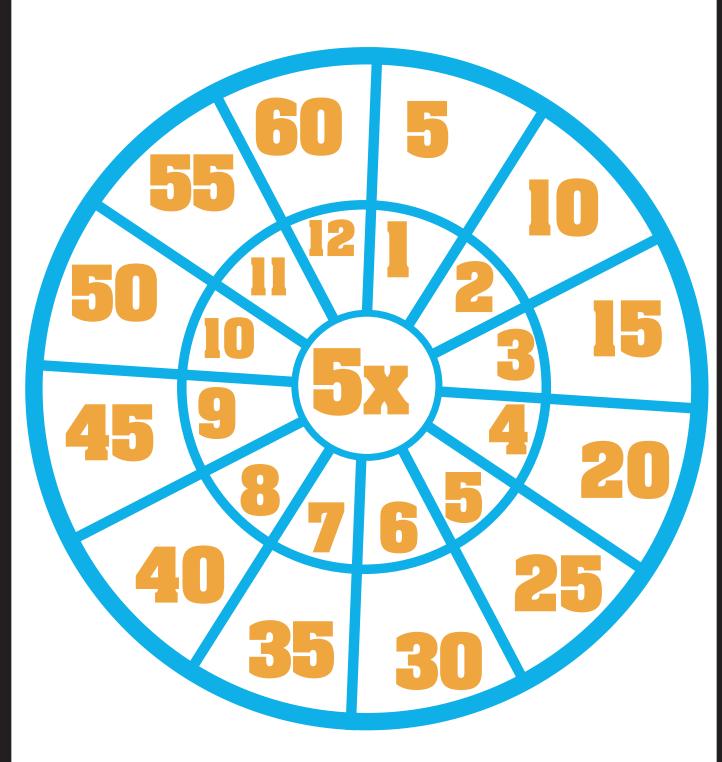
MUTIPLICATION RACE

Directions: Play with a partner. Each player chooses a marker and a side. Decide who starts. Roll the die. Take turns moving. Player 1 says the product. Player 2 checks the answer using the bookmark. If it is correct, stay on the spot. If it is incorrect, move back one. Whoever reaches first wins.

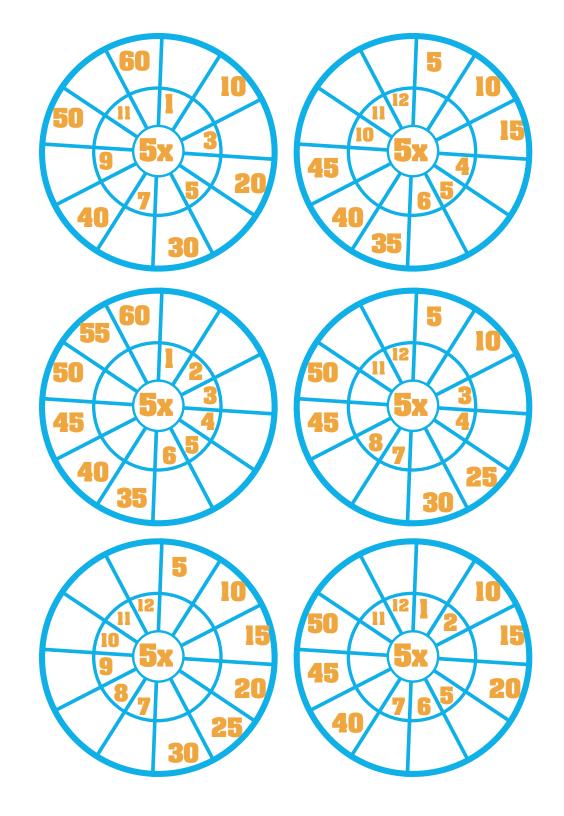


LOON RACE Help the animals get to the bunch of balloons 5 x 6 5 x 9 5 x 4 5 x 5 5 x 2

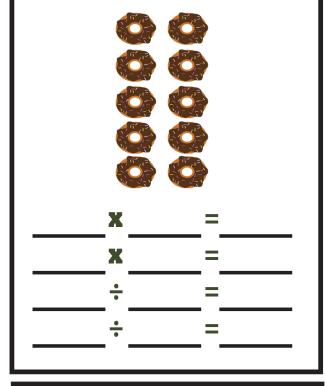
MULTIPLICATION WHEELS

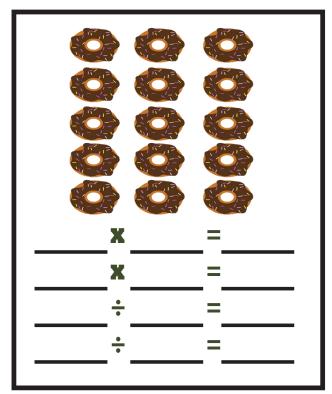


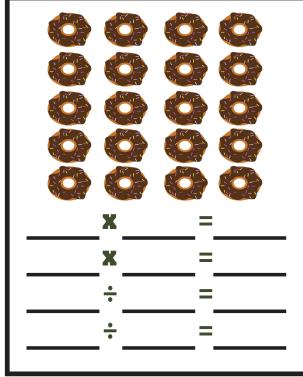
MULTIPLICATION WHEELS

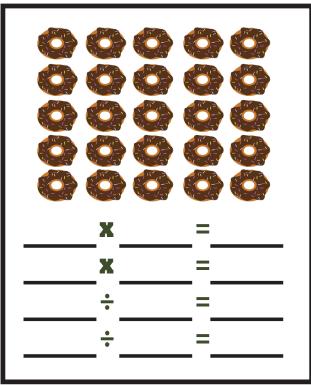


PICTURE FACT FAMILY

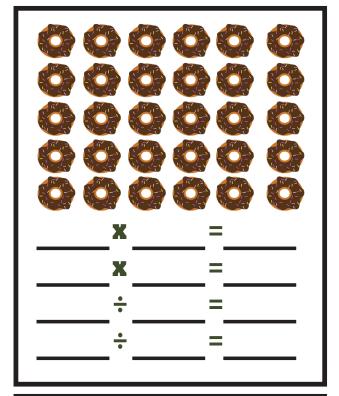


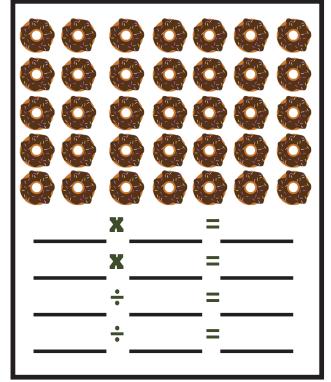


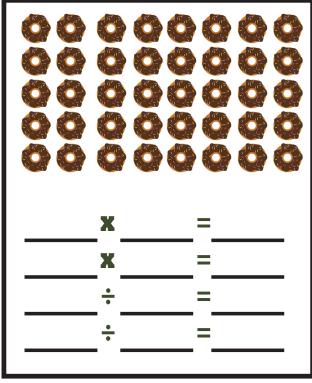


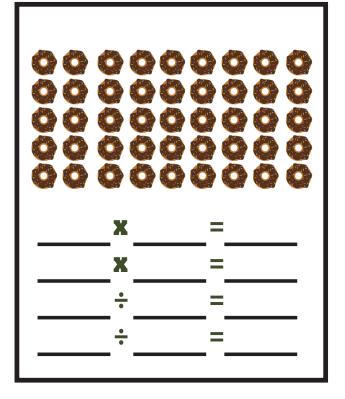


PICTURE FACT FAMILY

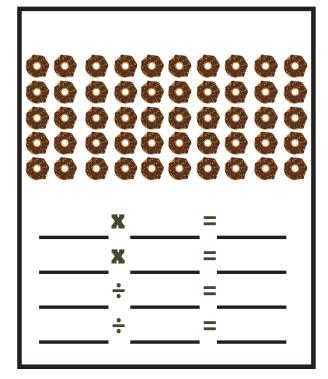




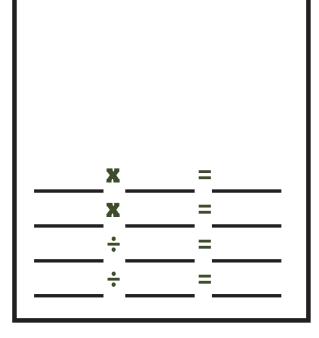


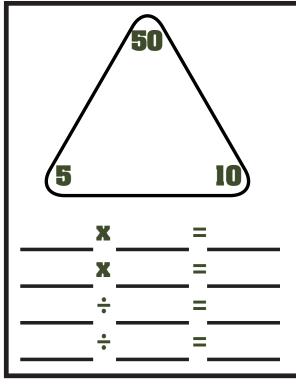


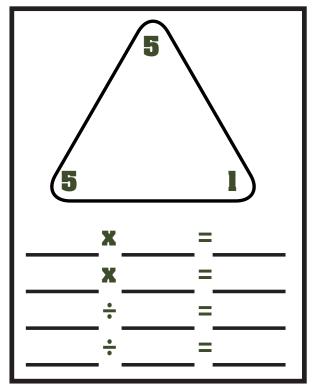
PICTURE FACT FAMILY

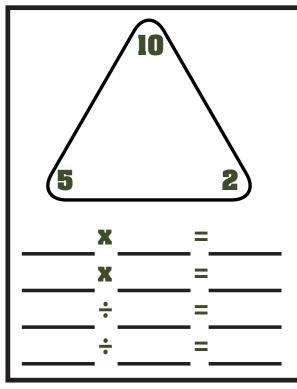


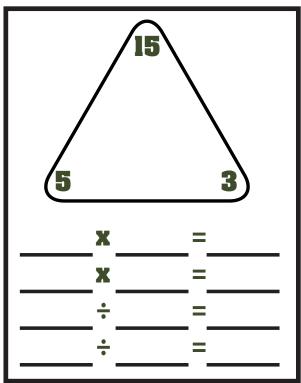
MAKE YOUR OWN

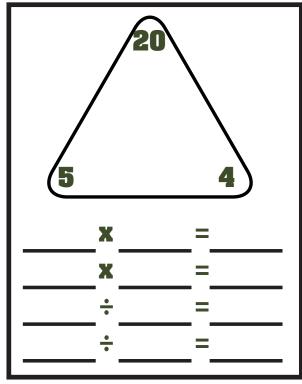


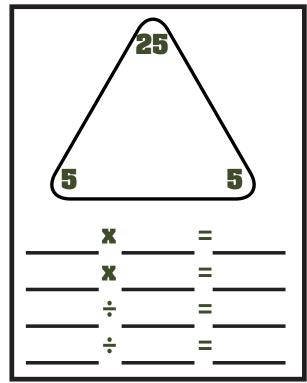


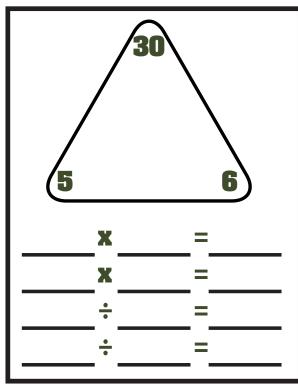


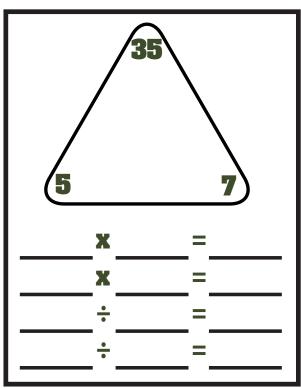


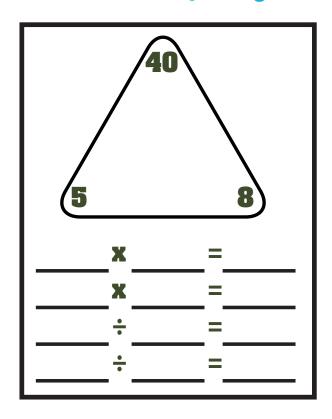


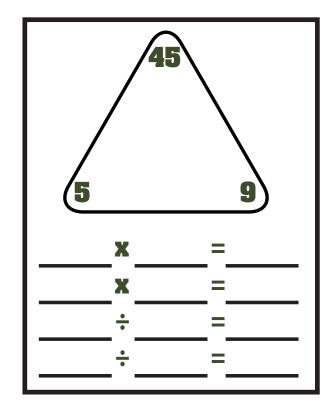


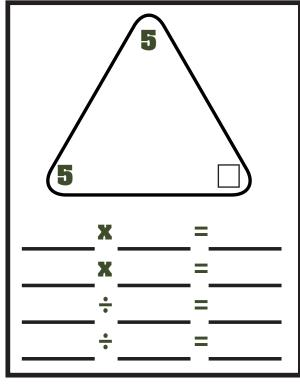


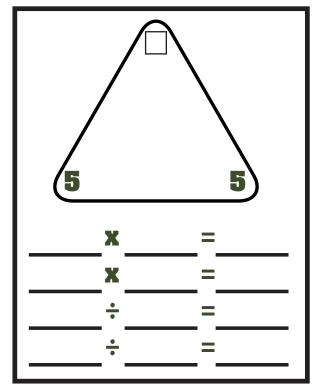


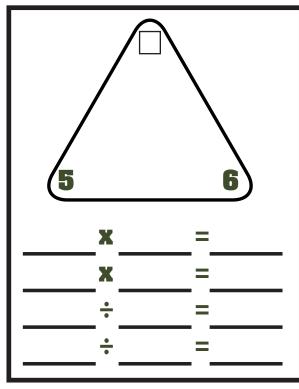


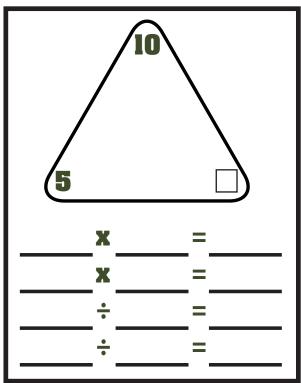


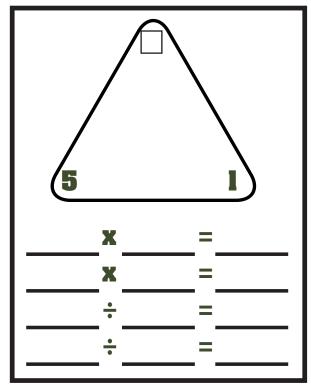


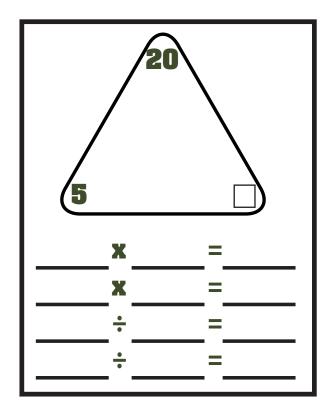


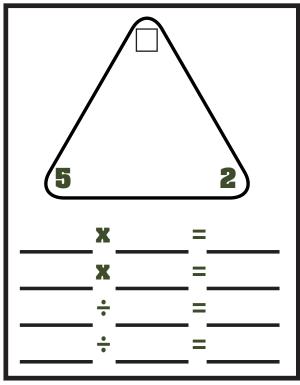












WORD PROBLEM MODEL VOIR THINKING AND SOLVE THE DROPE

THE BAKERY HAD 5 ROWS OF DONUTS. THERE WERE 6 DONUTS IN EACH ROW. HOW MANY DONUTS DID THEY HAVE ALTOGETHER? THE BAKERY HAD 5 BOXES WITH 4 DONUTS IN EACH. HOW MANY DONUTS DID THEY HAVE?

__ X ___ = ___

____ X ___ = ____

THERE WERE 5 BAGS OF DONUTS IN THE BAKERY. EACH BAG HAD 3 DONUTS INSIDE. HOW MANY DONUTS WERE THERE ALTOGETHER? THE BAKERY HAD 5 BOXES
OF DONUTS WITH 9
DONUTS IN EACH BOX.
HOW MANY DONUTS DID
THEY HAVE ALTOGETHER?

____ × ___ = ____

____ X ___ = ____



WRITE A 5'S FACT IN EACH BOX. THEN FOLLOW THE INSTRUCTIONS IN EACH BOX TO MATCH THE FACT.	
I CAN SKIP COUNT BY 5'S!	I CAN REPRESENT 5'S WITH EQUAL GROUPS!
I CAN REPRESENT 5'S WITH ARRAYS!	I CAN REPRESENT 5'S ON THE NUMBER LINE.
I CAN USE REPEATED ADDITION FOR MY 5'S.	MY STRATEGY FOR THINKING ABOUT 5'S IS

CERTIFICATE





 $5 \times 1 = 5$

 $5 \times 2 = 10$

 $5 \times 3 = 15$

 $5 \times 4 = 20$

 $5 \times 5 = 25$

 $5 \times 6 = 30$

 $5 \times 7 = 35$

 $5 \times 8 = 40$

 $5 \times 9 = 45$

 $5 \times 10 = 50$

Hint: Half of 10 facts



 $5 \times 1 = 5$

 $5 \times 2 = 10$

 $5 \times 3 = 15$

 $5 \times 4 = 20$

 $5 \times 5 = 25$

 $5 \times 6 = 30$

 $5 \times 7 = 35$

 $5 \times 8 = 40$

 $5 \times 9 = 45$

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Hint: Half of 10 facts