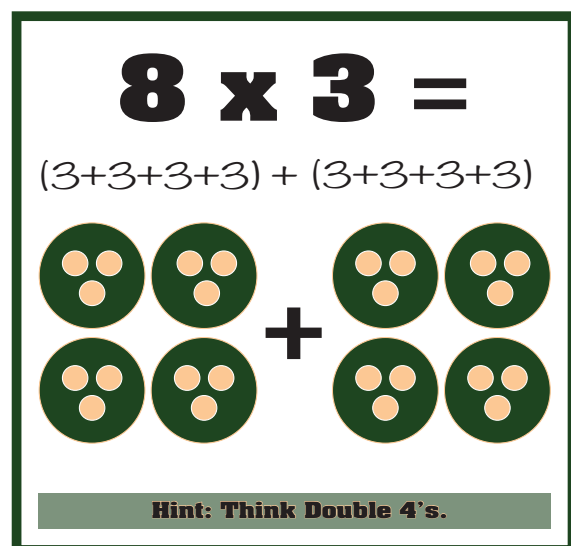
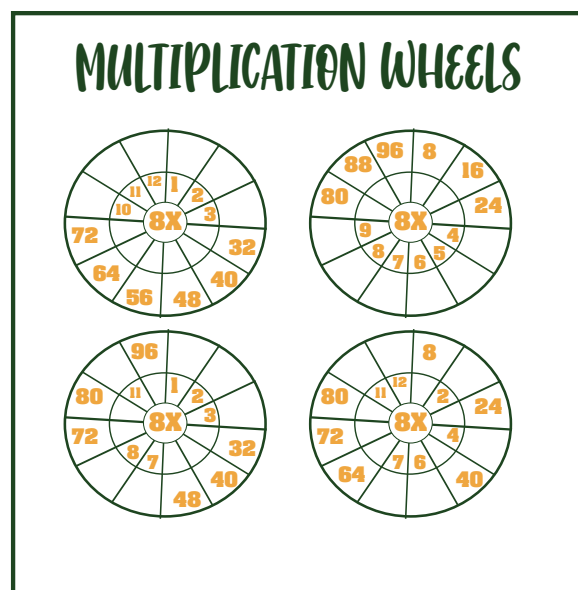
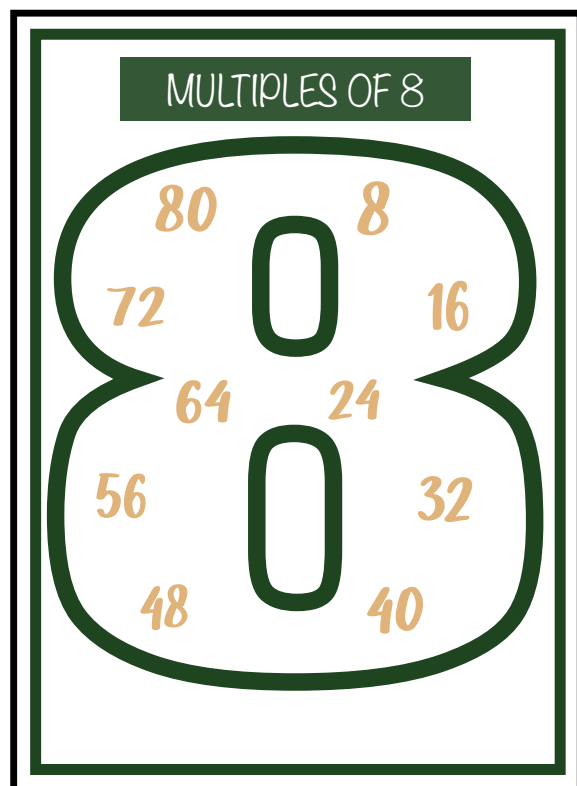


MULTIPLYING by 8

WORK BOOKLET ANSWER KEY

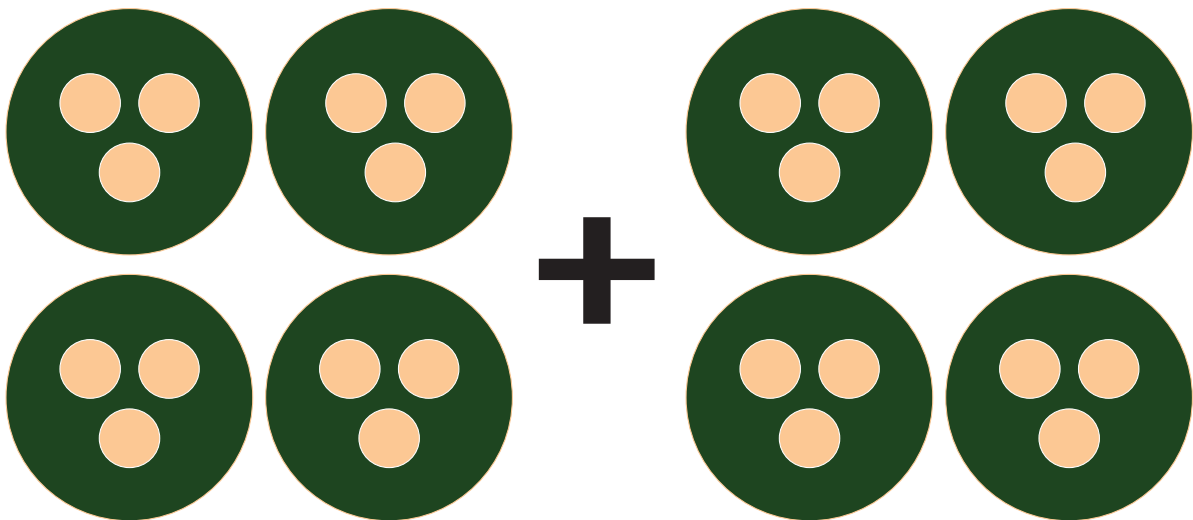


STRATEGY POSTER

When multiplying by **8**
Think Double 4's

$$8 \times 3 =$$

$$(4 \times 3) + (4 \times 3) + (3 + 3 + 3 + 3) + (3 + 3 + 3 + 3)$$



Hint: Think Double 4's

MULTIPLICATION

$$8 \times 6 = 48$$



FACTOR



FACTOR



PRODUCT

MULTIPLES OF EIGHT

8



16



24



32



40



48



56



64



72



80



88



96



MULTIPLES OF EIGHT

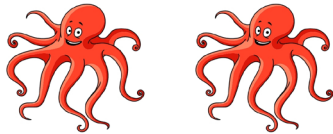
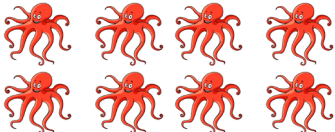
8     16     24    

32     40     48    

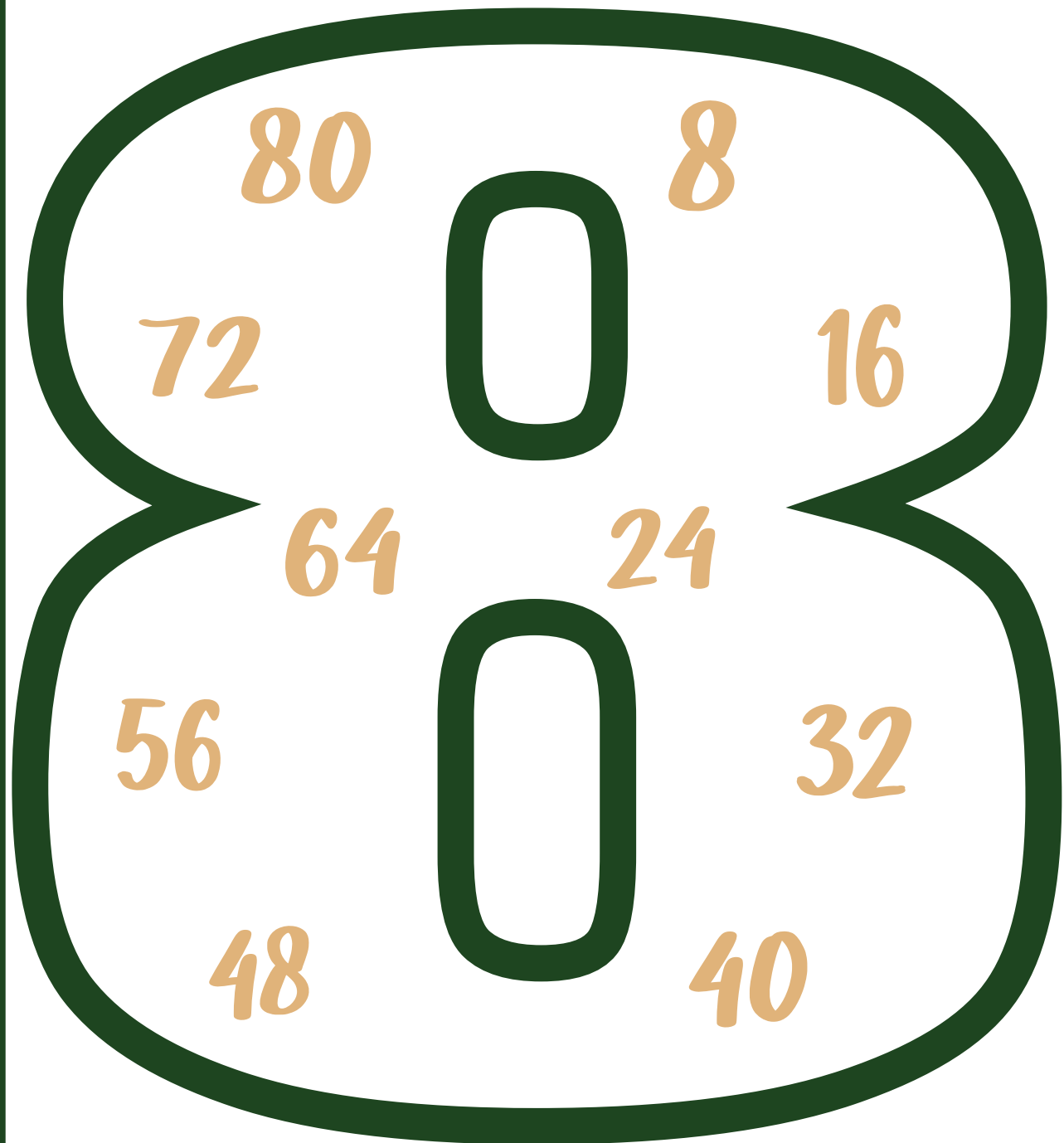
56     64     72    

80     88     96    

PICTURING THE MATH

GROUP 8 LEGS ARE ON AN OCTOPUS.	COUNT BY SEQUENCE	MULTIPLICATION EQUATION
If you have 2 octopi, how many legs would you have? 	8, 16	$2 \times 8 = 16$
If you have 5 octopi, how many legs would you have? 	8,16,24,32,40	$5 \times 8 = 40$
If you have 7 octopi, how many legs would you have? 	8, 16,24,32,40,48,56	$7 \times 8 = 56$
If you have 4 octopi, how many legs would you have? 	8,16,24,32	$4 \times 8 = 32$
If you have 8 octopi, how many legs would you have? 	8,16,24,32,40,48,56,64	$8 \times 8 = 64$

MULTIPLES OF 8

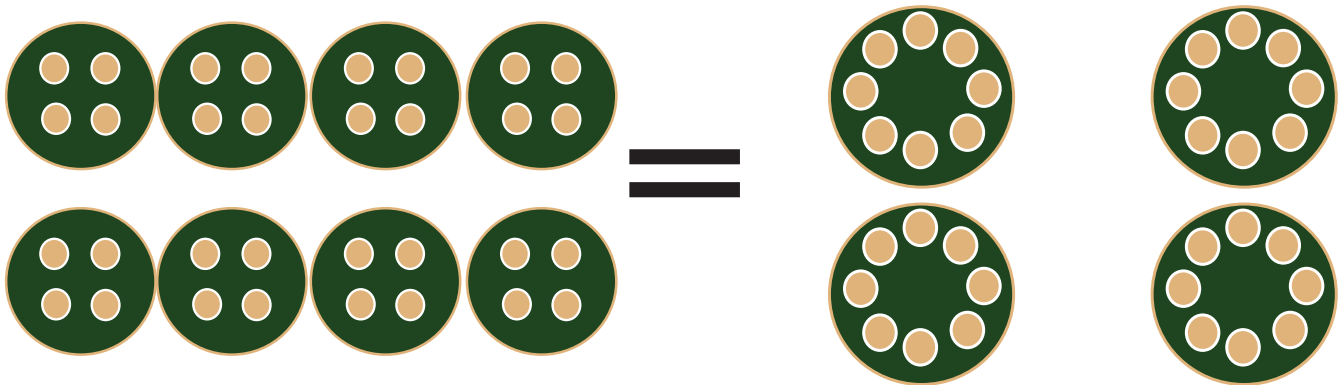




VOCABULARY

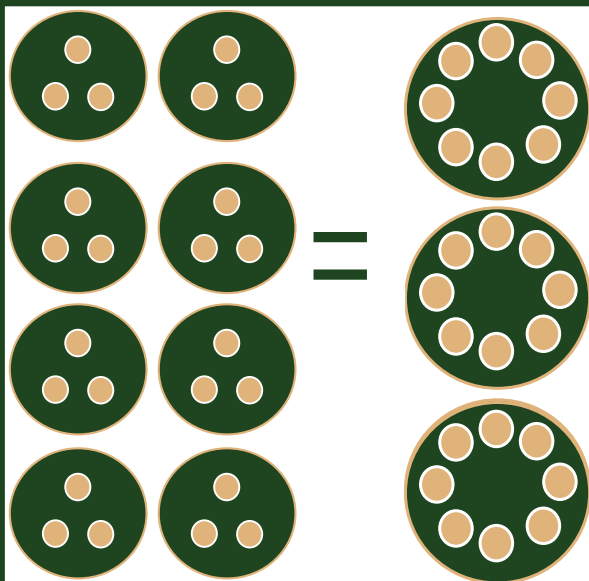
COMMUTATIVE PROPERTY

$$8 \times 4 = 4 \times 8$$

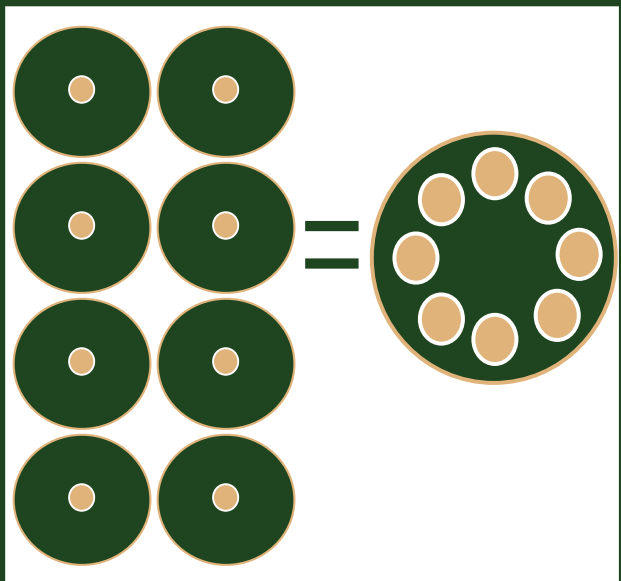


MODEL THE FACTS

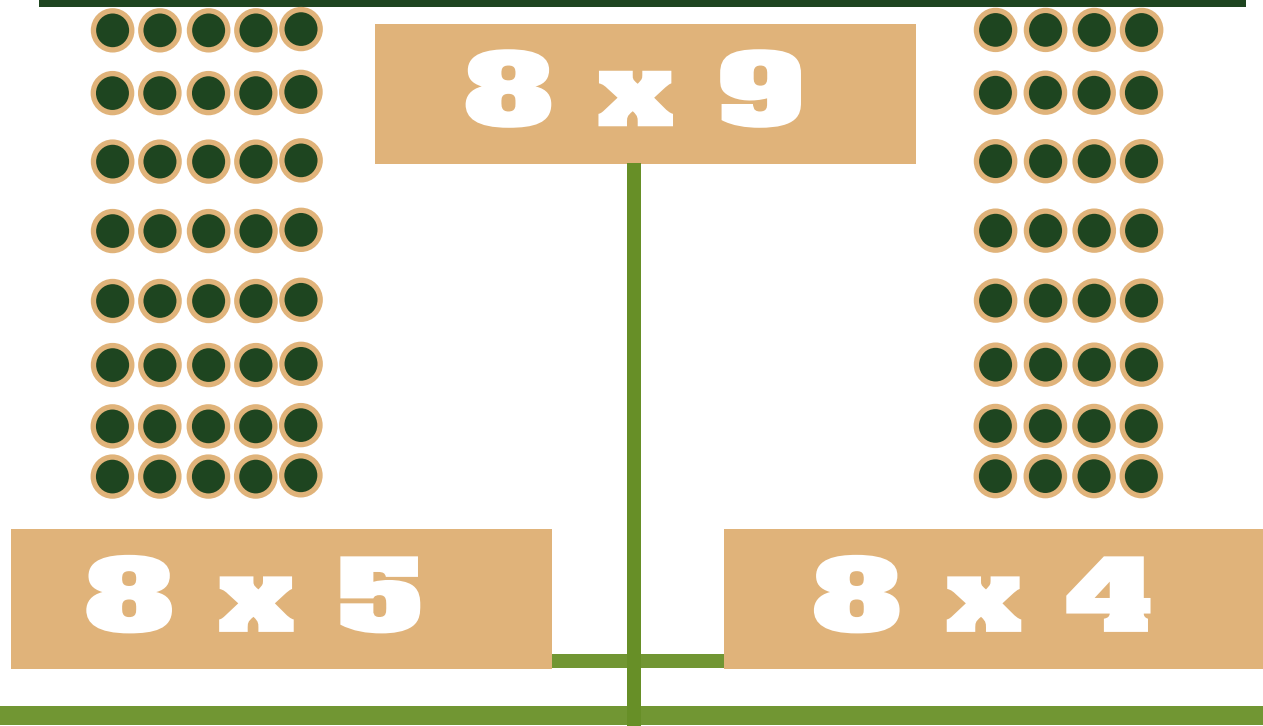
$$8 \times 3 = 3 \times 8$$



$$8 \times 1 = 1 \times 8$$

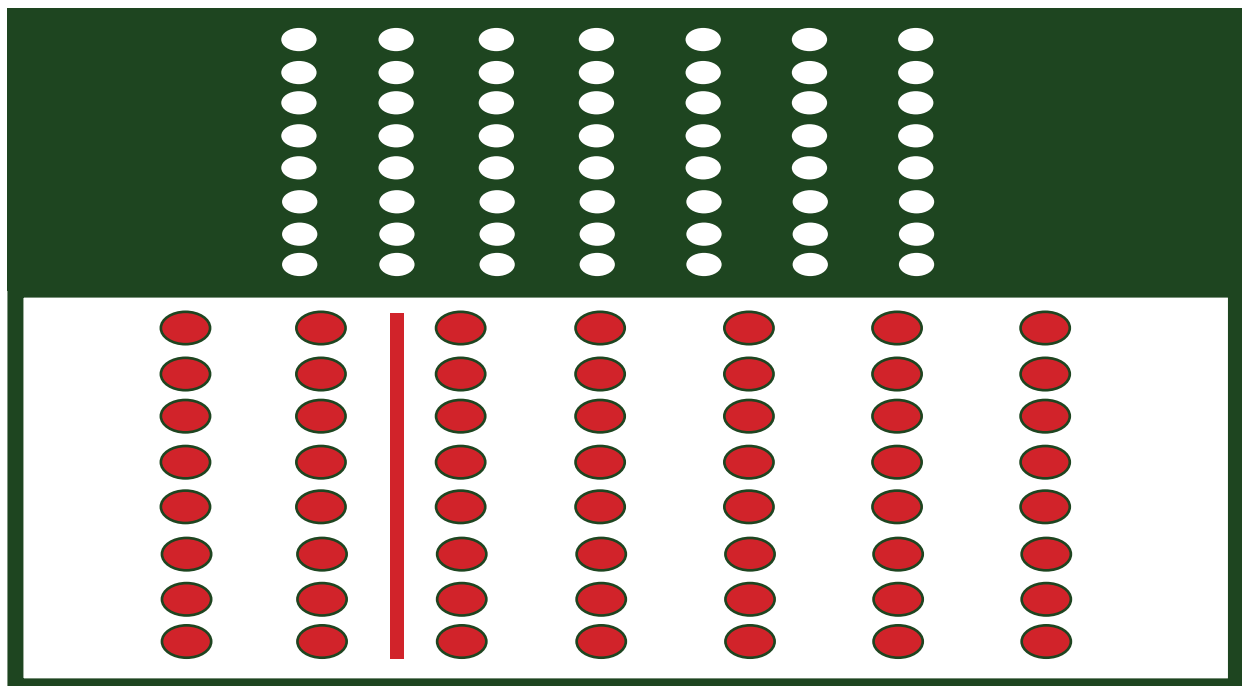


DISTRIBUTIVE PROPERTY



MODEL THE FACTS

$$8 \times 7 = (\underline{8} \times \underline{2}) + (\underline{8} \times \underline{5})$$



There are other to ways to model this as well.

ASSOCIATIVE PROPERTY

$$8 \times 3 \times 2$$

$$8 \times 6 \text{ or } 6 \times 8$$

MORE EXAMPLES

$$8 \times 1 \times 8 = \underline{8} \times \underline{8}$$

$$8 \times 8 \times 8 = \underline{8} \times \underline{64}$$

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

These are examples. There are other answers.

FREE CHOICE

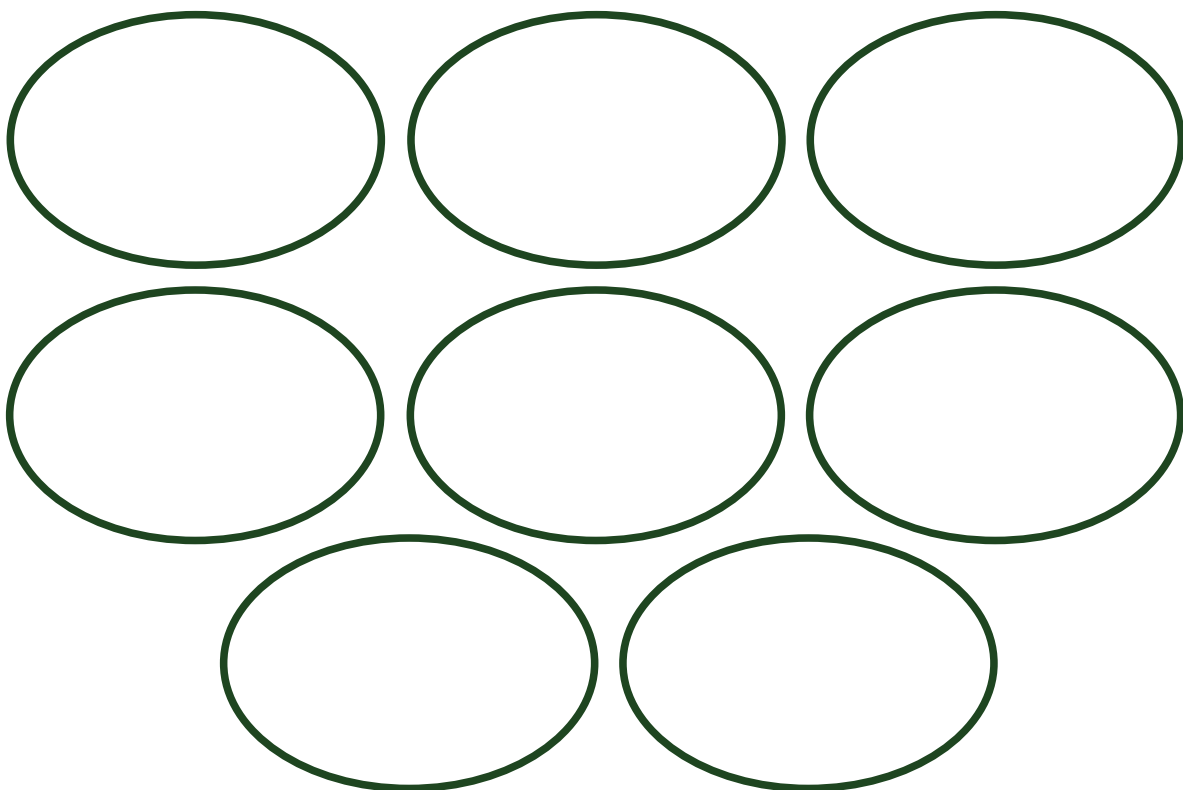
$$\underline{\quad} \times \underline{\quad} \times \underline{\quad} = \underline{\quad} \times \underline{\quad}$$

ZERO PROPERTY

When you multiply
by zero you get zero...

Zero groups of anything is zero

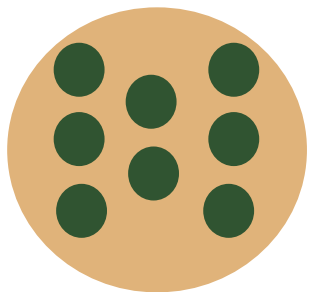
8 groups of 0 is 0



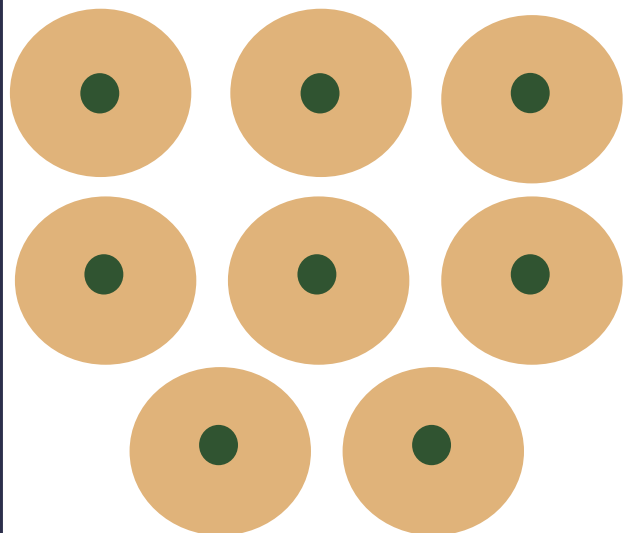
IDENTITY PROPERTY

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

**1 group of
8 is 8**

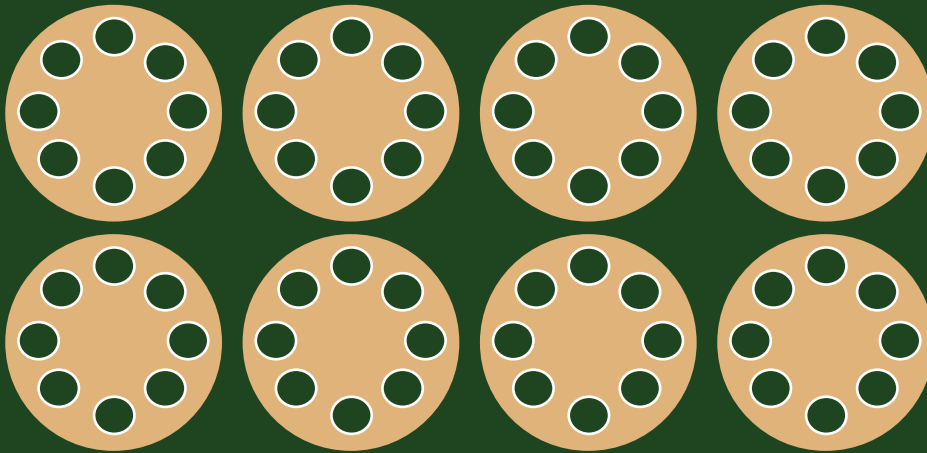


**8 groups
of 1 is 8**



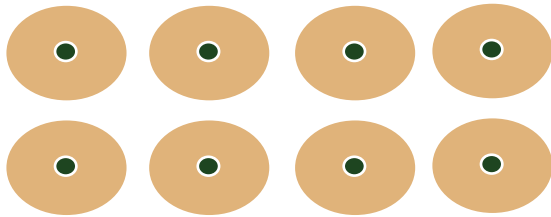
Modeling Multiplication

DRAW EQUAL GROUPS

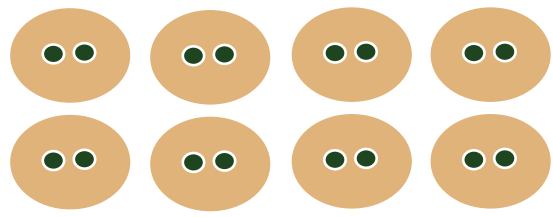


$$8 \times 8$$

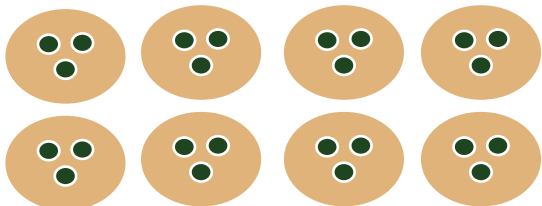
$$8 \times 1$$



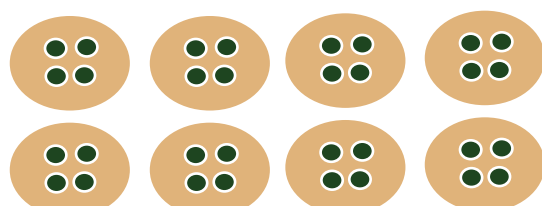
$$8 \times 2$$



$$8 \times 3$$



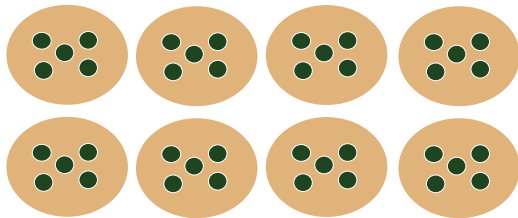
$$8 \times 4$$



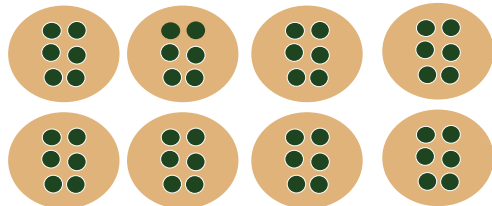
Modeling Multiplication

DRAW EQUAL GROUPS

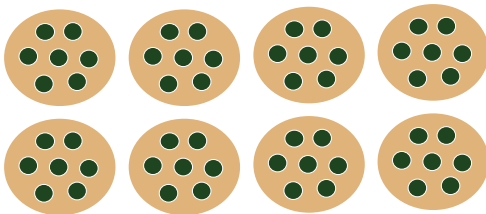
8×5



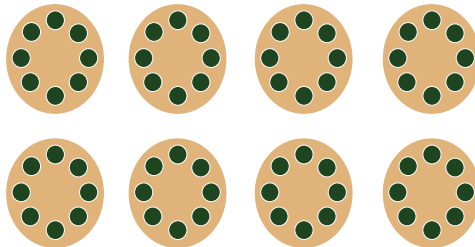
8×6



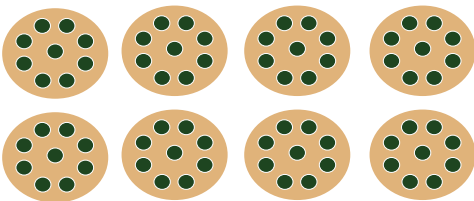
8×7



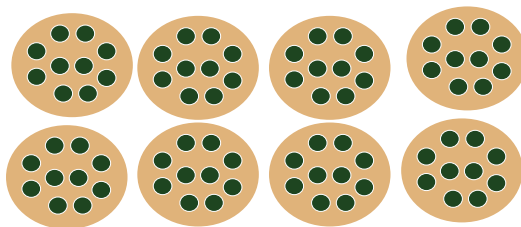
8×8



8×9



8×10



FREE CHOICE

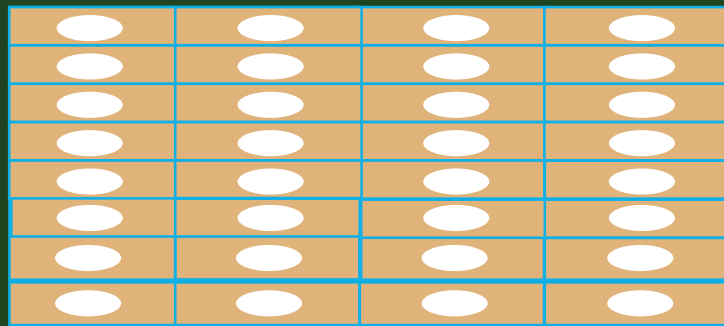
FREE CHOICE

Modeling Multiplication

DRAW AN ARRAY

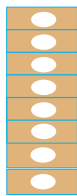
8 groups of 4

$$8 \times 4 = ?$$

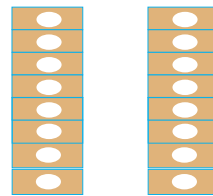


DRAW AN ARRAY

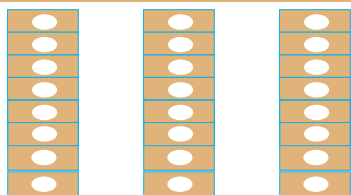
$$8 \times 1$$



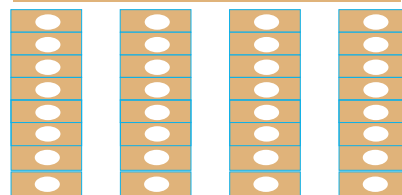
$$8 \times 2$$



$$8 \times 3$$



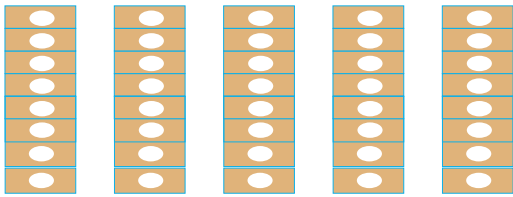
$$8 \times 4$$



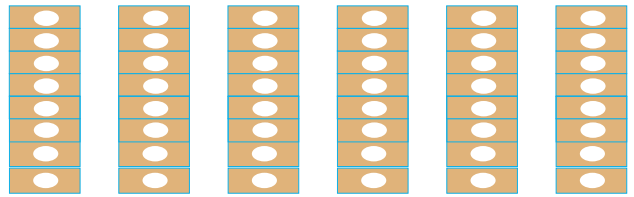
Modeling Multiplication

DRAW AN ARRAY

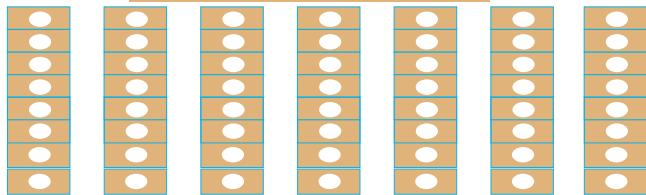
8×5



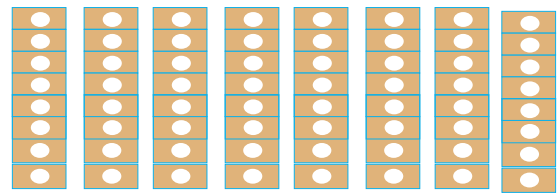
8×6



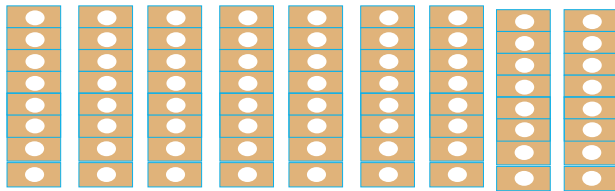
8×7



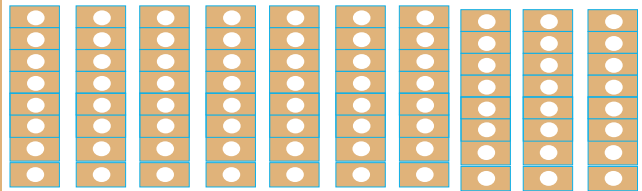
8×8



8×9



8×10



FREE CHOICE

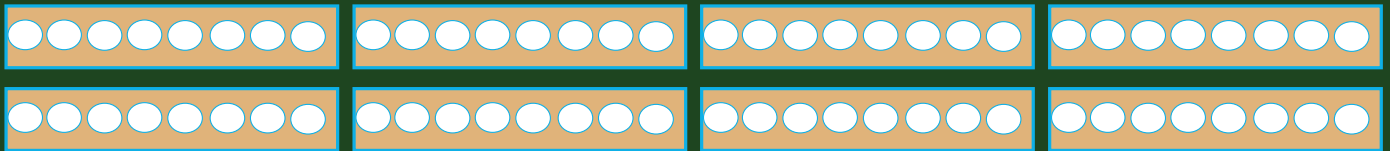
FREE CHOICE

Multiplication Strategies:

REPEATED ADDITION

8 groups of 8

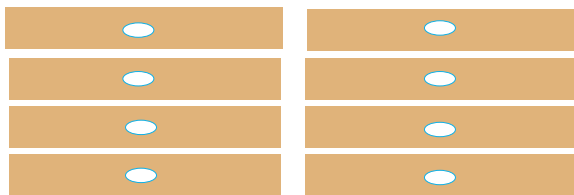
$$8 + 8 + 8 + 8 + 8 + 8 + 8 + 8 = 64$$



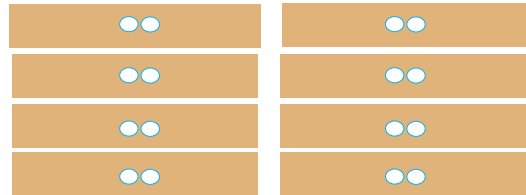
$$8 \times 8 = 64$$

MODEL THE REPEATED ADDITION SENTENCE

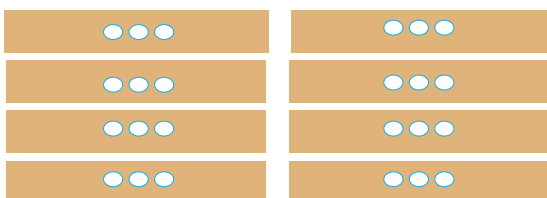
$$8 \times 1 = 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1$$



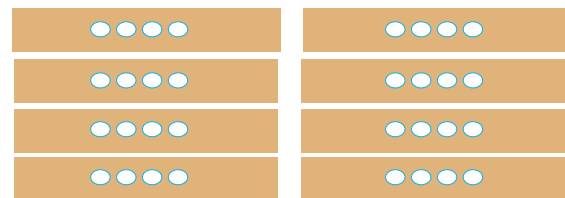
$$8 \times 2 = 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2$$



$$8 \times 3 = 3 + 3 + 3 + 3 + 3 + 3 + 3 + 3$$



$$8 \times 4 = 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4$$

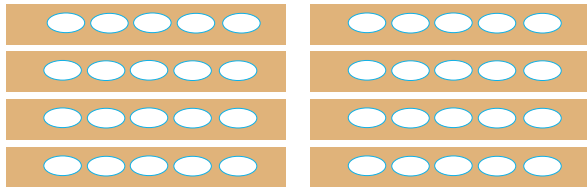


Multiplication strategies:

REPEATED ADDITION

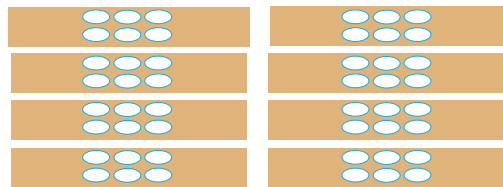
$$8 \times 5 =$$

$$5+5+5+5+5+5+5+5$$



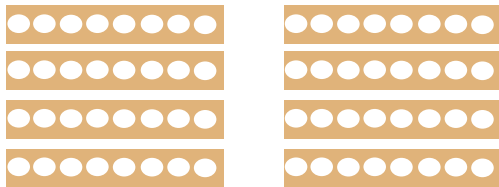
$$8 \times 6 =$$

$$6+6+6+6+6+6+6+6$$



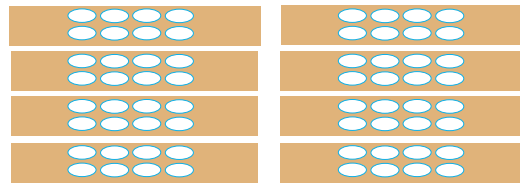
$$8 \times 7 =$$

$$7+7+7+7+7+7+7+7$$



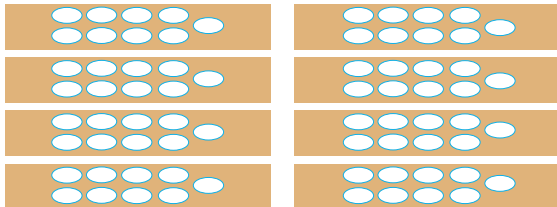
$$8 \times 8 =$$

$$8+8+8+8+8+8+8+8$$



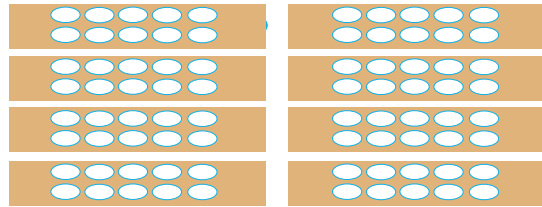
$$8 \times 9 =$$

$$9+9+9+9+9+9+9+9$$



$$8 \times 10 =$$

$$10+10+10+10+10+10+10+10$$



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

8	16	24	32	40	48	56	64	72	80
---	----	----	----	----	----	----	----	----	----

FILL IN THE MISSING NUMBERS

8	16	24	32	40	48	56	64	72	80
---	----	----	----	----	----	----	----	----	----

FILL IN THE MISSING NUMBERS

8	16	24	32	40	48	56	64	72	80
---	----	----	----	----	----	----	----	----	----

FILL IN THE MISSING NUMBERS

8	16	24	32	40	48	56	64	72	80
---	----	----	----	----	----	----	----	----	----

Modeling Multiplication

SKIP COUNTING

FILL IN THE MISSING NUMBERS. MODEL 8×1 ON THE NUMBER LINE.



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



FILL IN THE MISSING NUMBERS. MODEL 8×3 ON THE NUMBER LINE.



Modeling Multiplication

SKIP COUNTING

FILL IN THE MISSING NUMBERS. MODEL 8×4 ON THE NUMBER LINE.



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



FILL IN THE MISSING NUMBERS. MODEL 8×6 ON THE NUMBER LINE.



FILL IN THE MISSING NUMBERS. MODEL 8×7 ON THE NUMBER LINE.



Modeling Multiplication

SKIP COUNTING

FILL IN THE MISSING NUMBERS. MODEL 8×8 ON THE NUMBER LINE.



FILL IN THE MISSING NUMBERS. MODEL 8×9 ON THE NUMBER LINE.



FILL IN THE MISSING NUMBERS. MODEL 8×10 ON THE NUMBER LINE.



Multiplication Strategies:

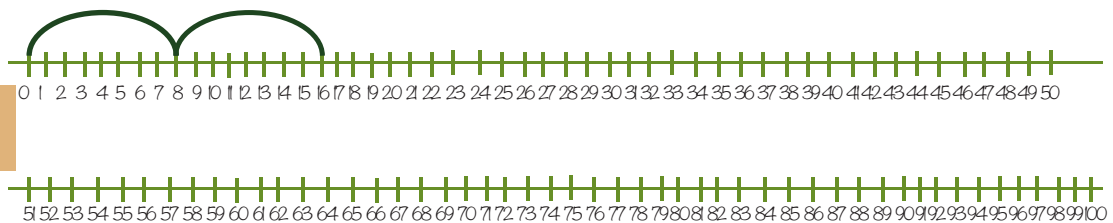
SKIP COUNTING ON THE NUMBER LINE



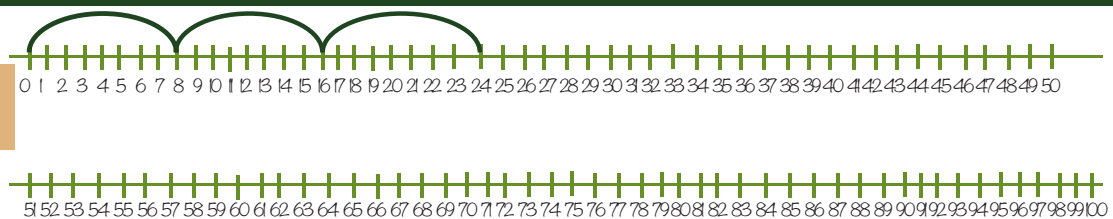
$$8 \times 2$$

SOLVE THE PROBLEM ON THE NUMBER LINE.

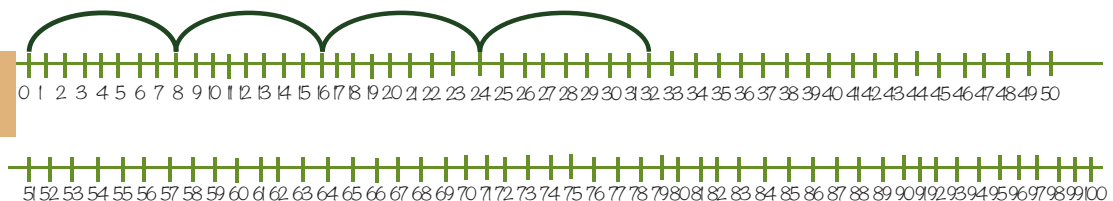
$$8 \times 2$$



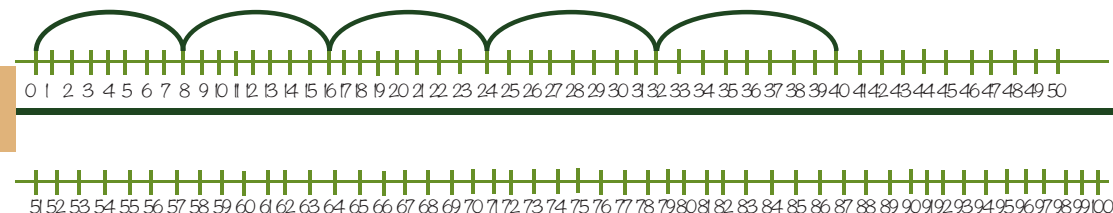
$$8 \times 3$$



$$8 \times 4$$



$$8 \times 5$$



SOLVE THE PROBLEM ON THE NUMBER LINE

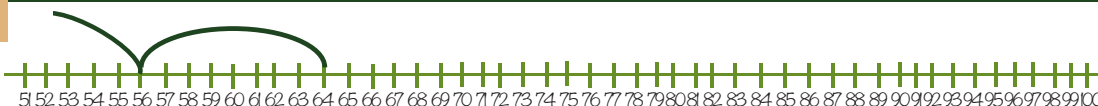
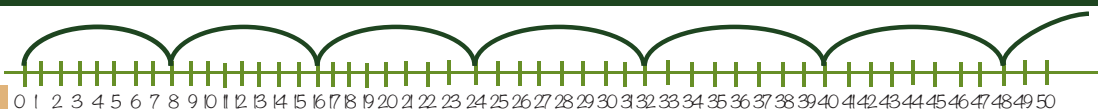
8×6



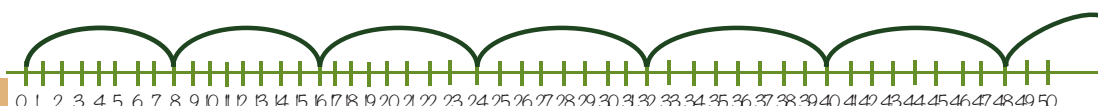
8×7



8×8



8×9



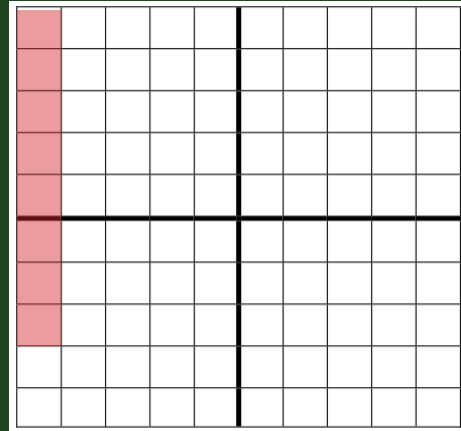
8×10



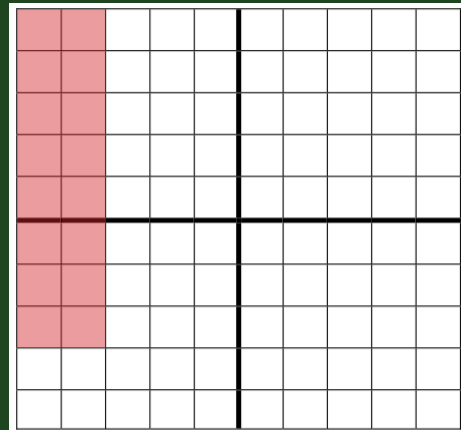
Array Flashcards

MODEL THE PROBLEMS ON THE GRIDS.

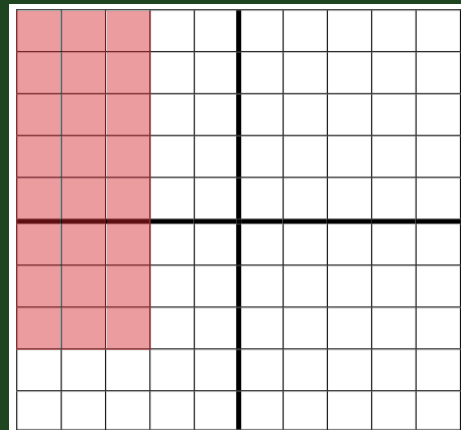
$$8 \times 1 = \underline{8}$$



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



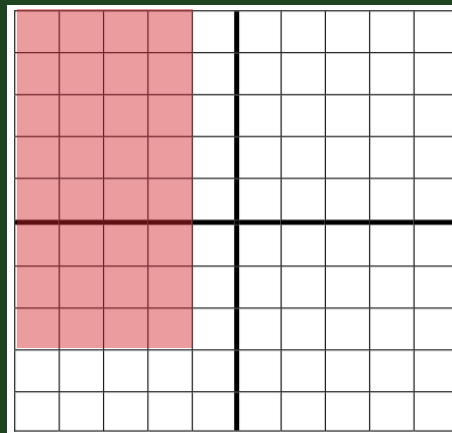
$$8 \times 3 = \underline{24}$$



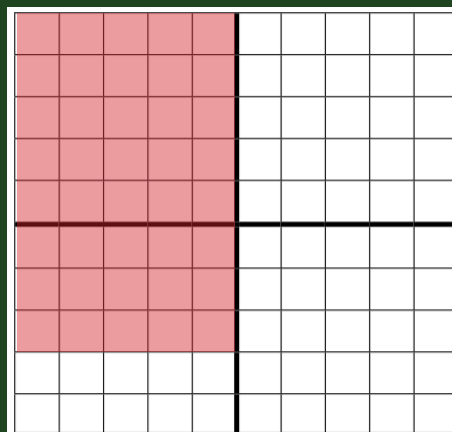
Array Flashcards

MODEL THE PROBLEMS ON THE GRIDS.

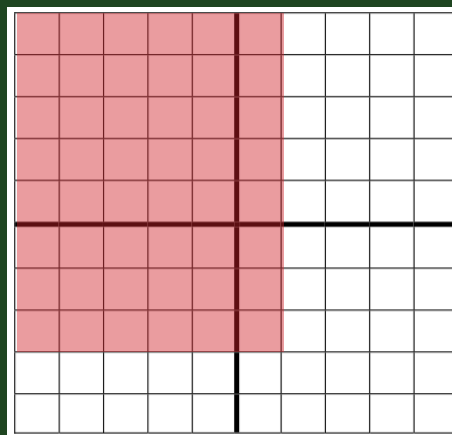
$$8 \times 4 = \underline{32}$$



$$8 \times 5 = \underline{40}$$



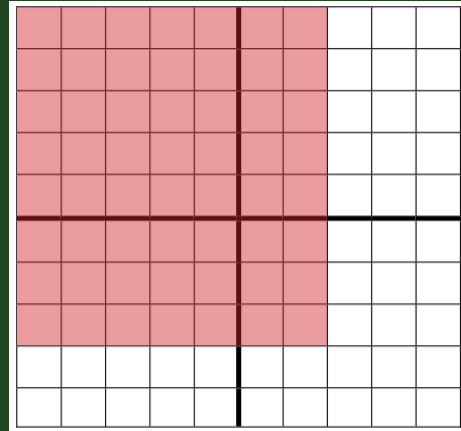
$$8 \times 6 = \underline{48}$$



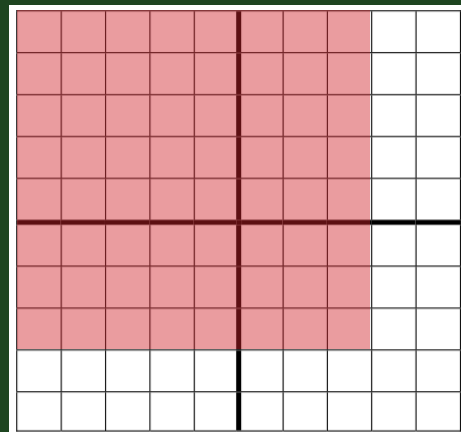
Array Flashcards

MODEL THE PROBLEMS ON THE GRIDS.

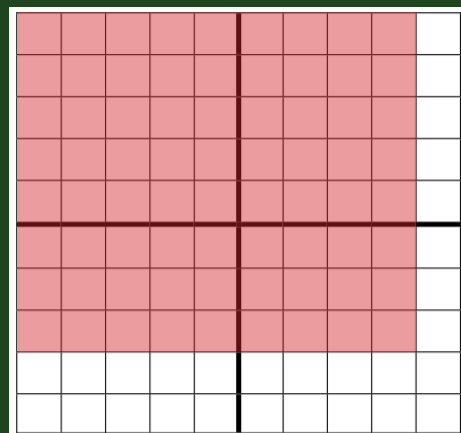
$$8 \times 7 = \underline{56}$$



$$8 \times 8 = \underline{64}$$



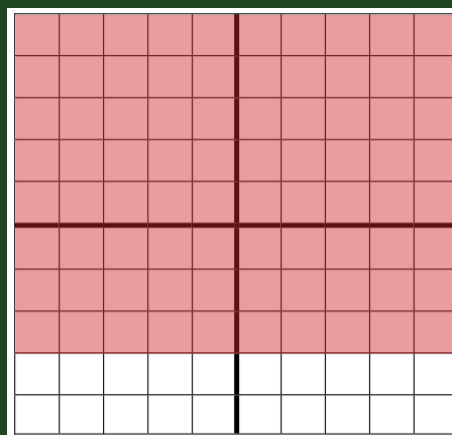
$$8 \times 9 = \underline{72}$$



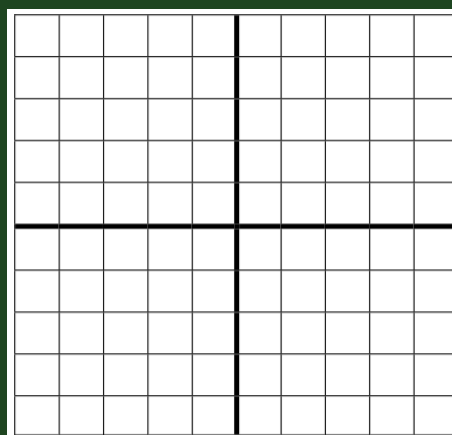
Array Flashcards

MODEL THE PROBLEMS ON THE GRIDS.

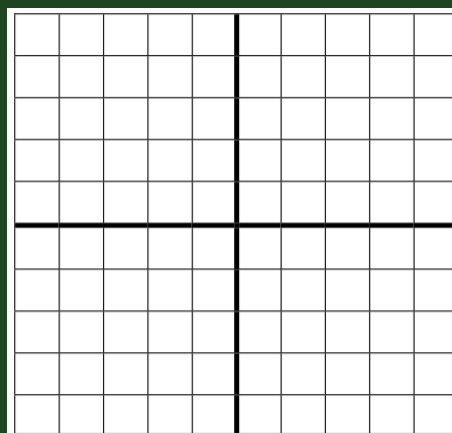
$$8 \times 10 = \underline{80}$$



FREE CHOICE



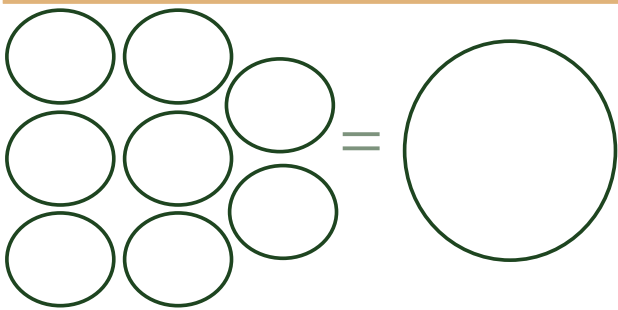
FREE CHOICE



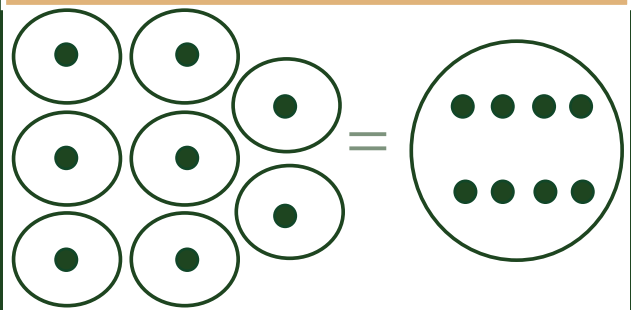
Equal Group Flashcards

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

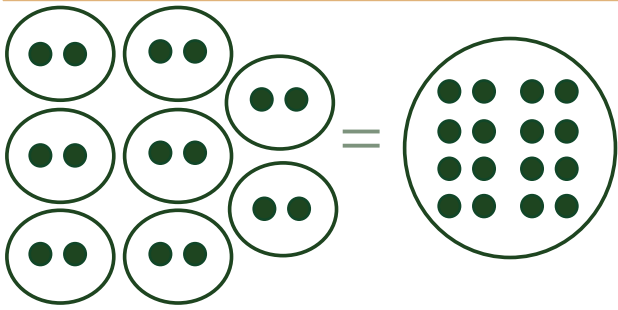
$$8 \times 0 = 0$$



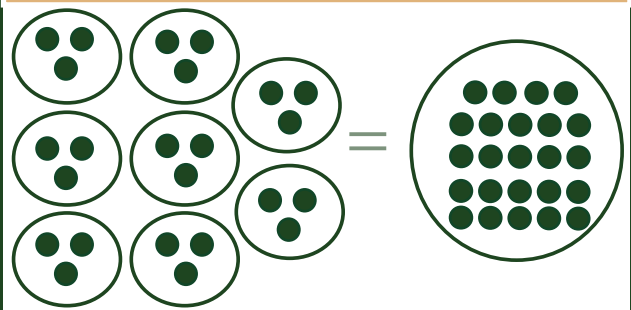
$$8 \times 1 = 8$$



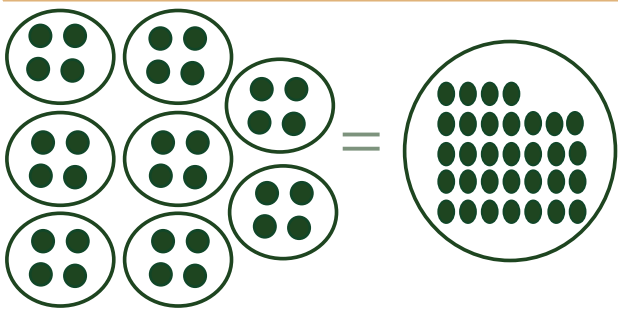
$$8 \times 2 = 16$$



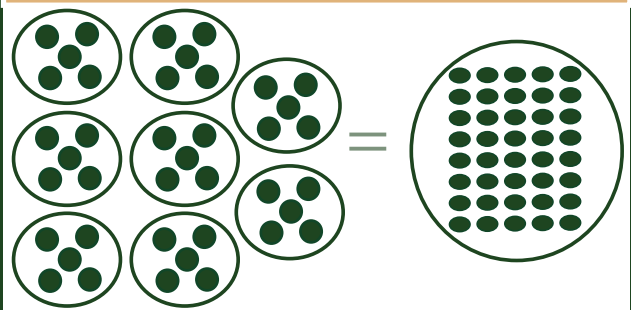
$$8 \times 3 = 24$$



$$8 \times 4 = 32$$



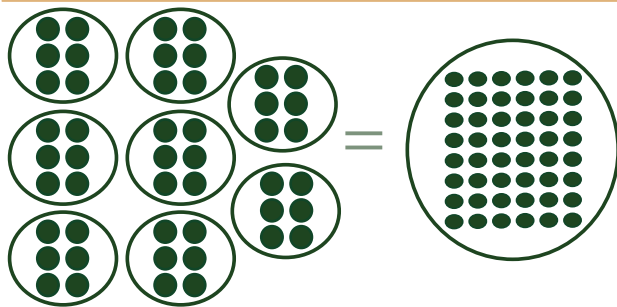
$$8 \times 5 = 40$$



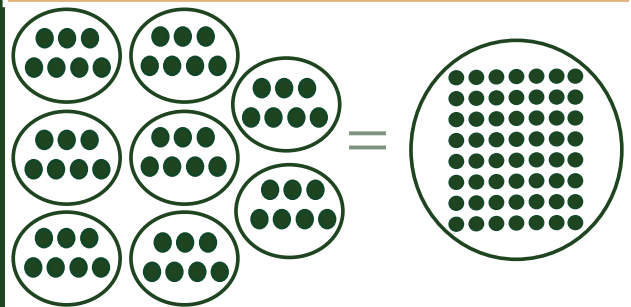
Equal Group Flashcards

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

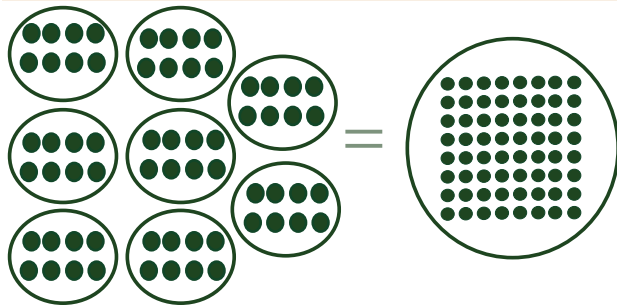
$$8 \times 6 = 48$$



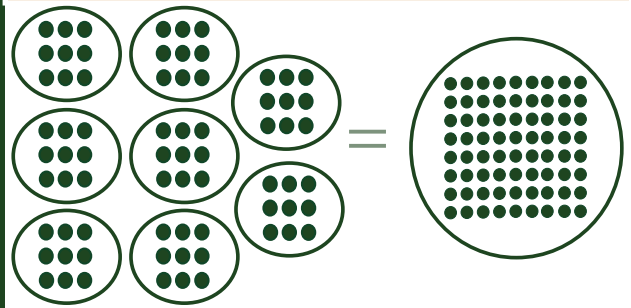
$$8 \times 7 = 56$$



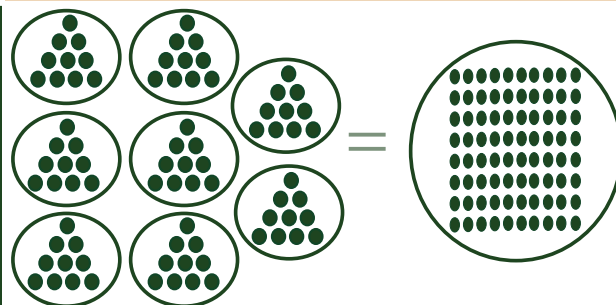
$$8 \times 8 = 64$$



$$8 \times 9 = 72$$



$$8 \times 10 = 80$$



Regular Flashcards

$$8 \times 0$$

$$8 \times 1$$

$$8 \times 2$$

$$8 \times 3$$

$$8 \times 4$$

$$8 \times 5$$

Regular Flashcards

$$8 \times 6$$

$$8 \times 7$$

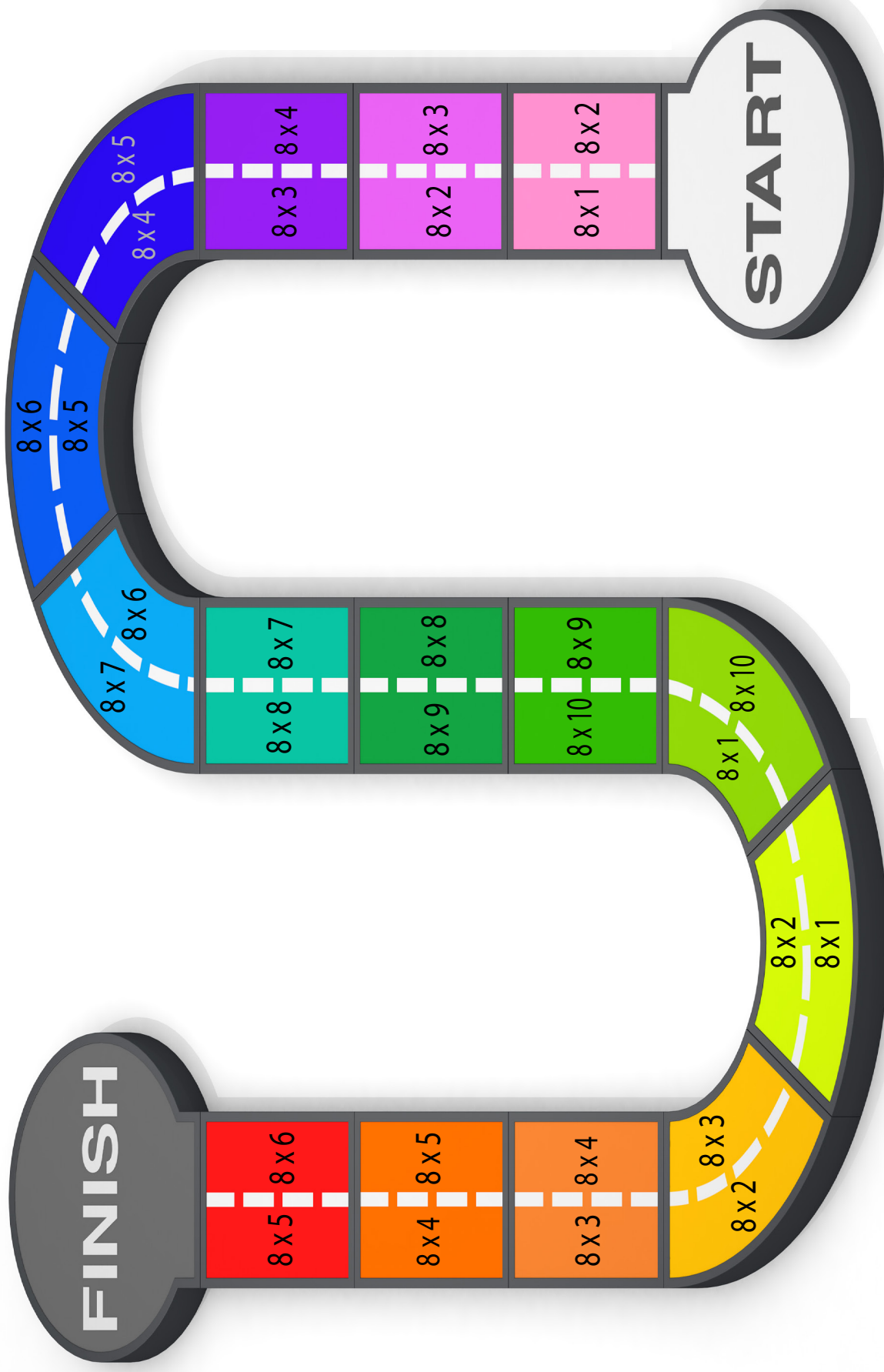
$$8 \times 8$$

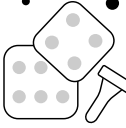
$$8 \times 9$$

$$8 \times 10$$

MULTIPLICATION 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.

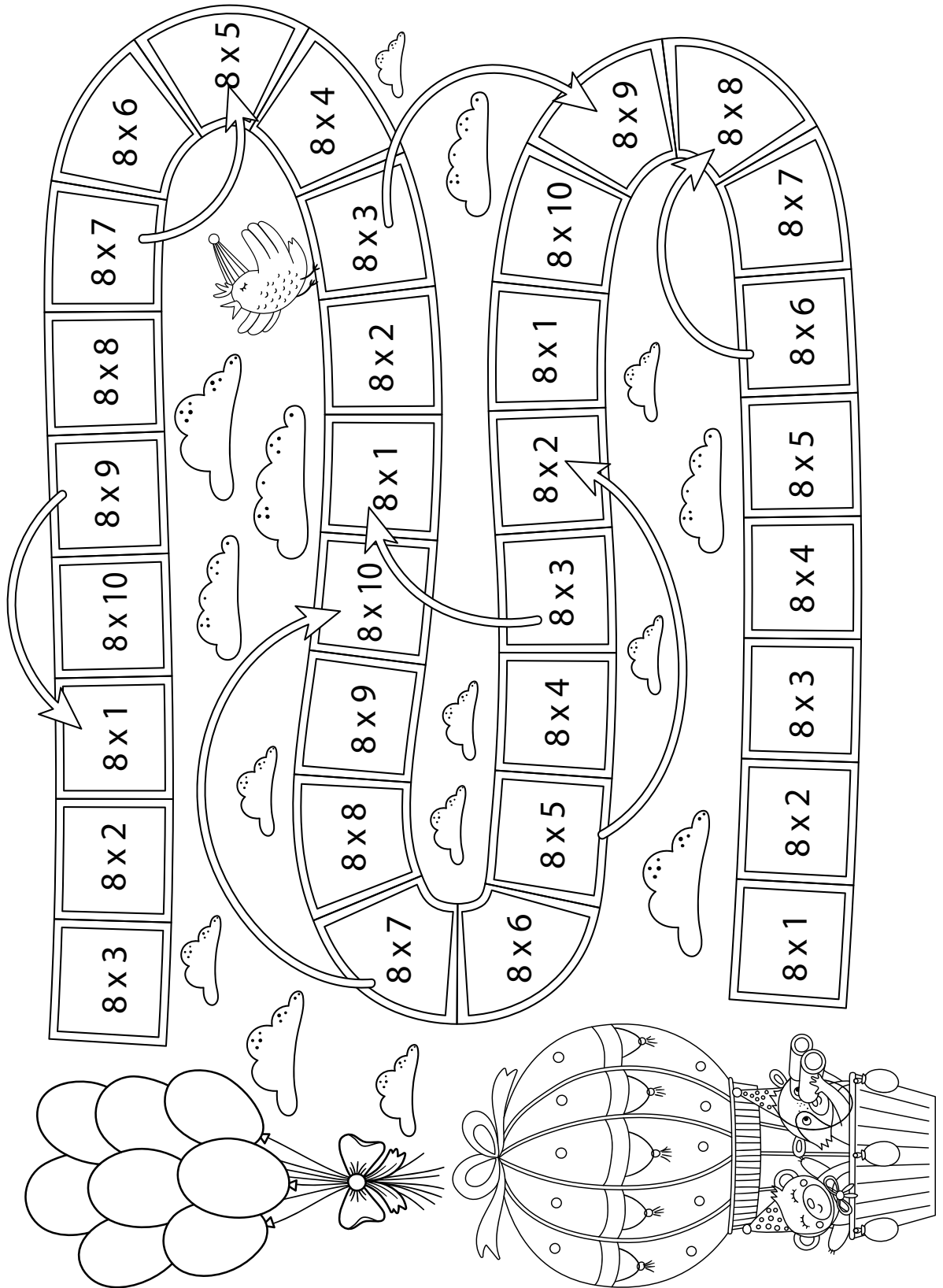




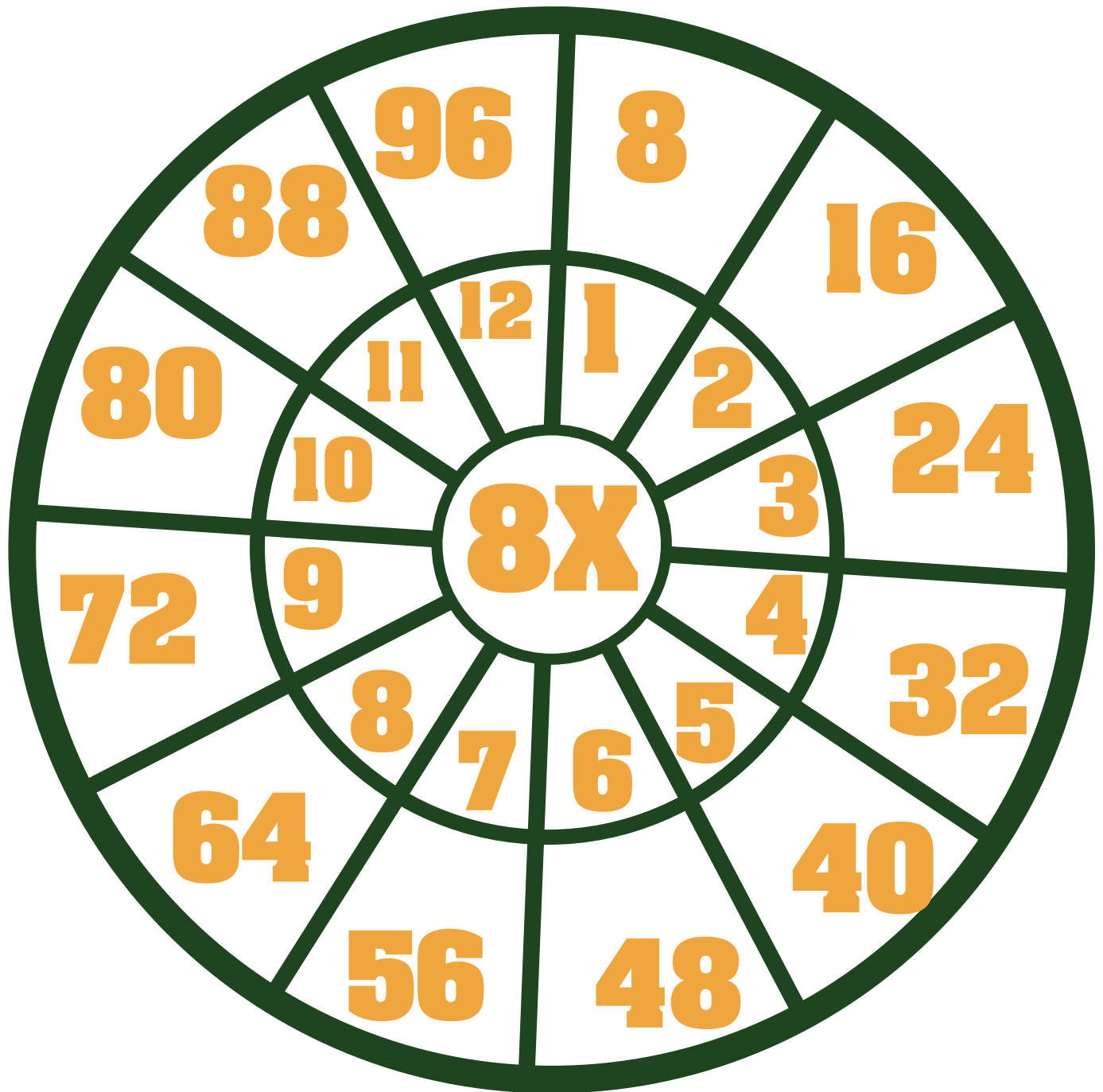
Instructions: Roll the dice and move. Solve the problem on the space where you land. Whoever reaches the end first wins.

Help the animals get to the bunch of balloons

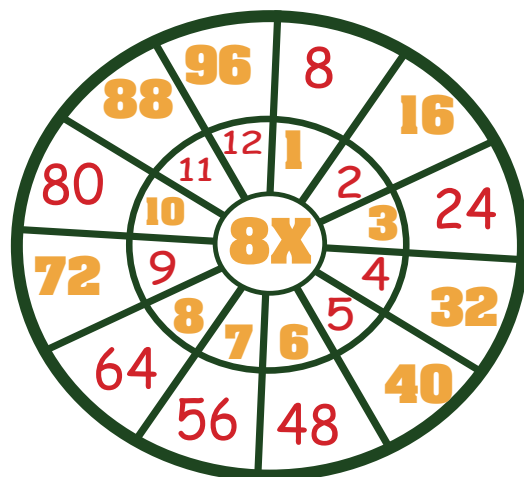
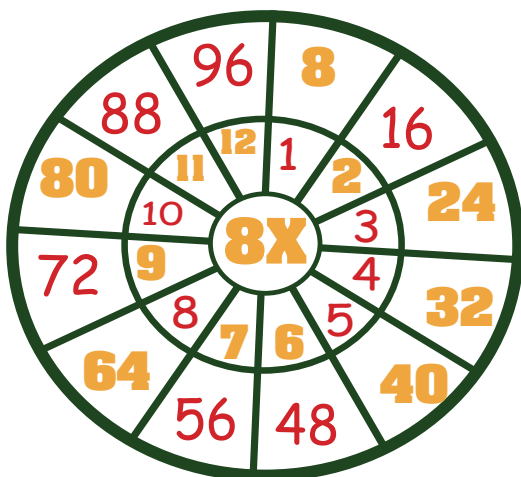
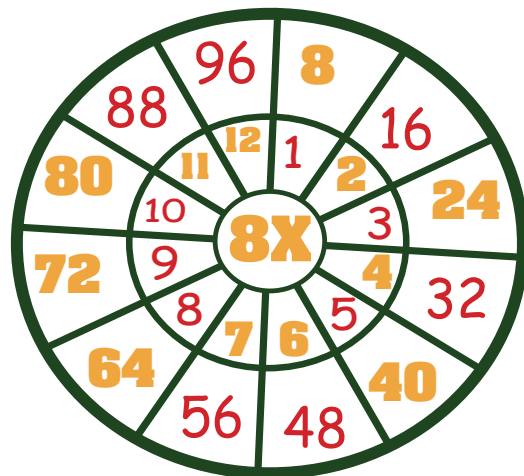
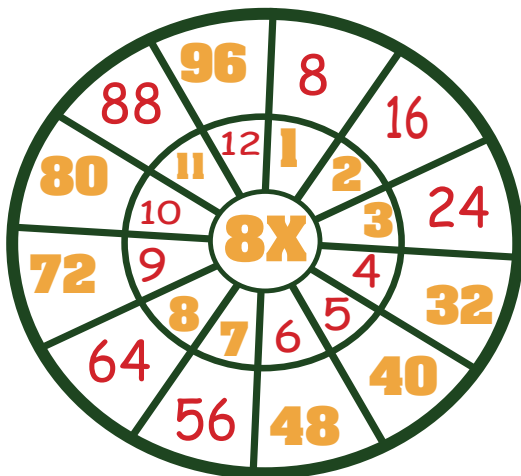
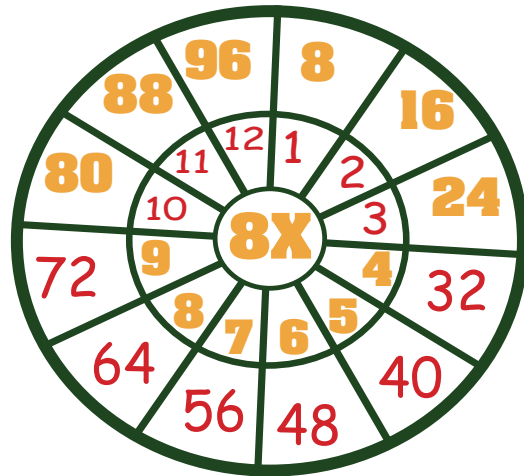
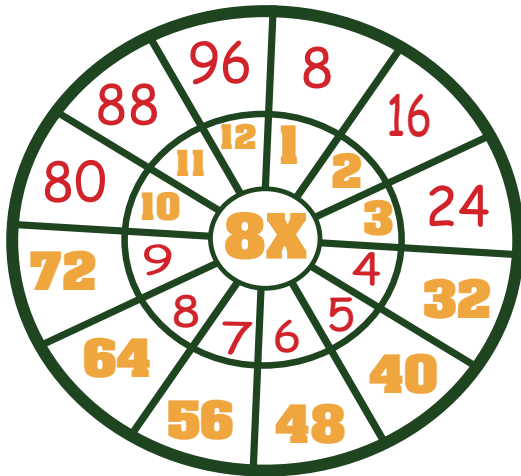
BALLOON RACE



MULTIPLICATION WHEELS



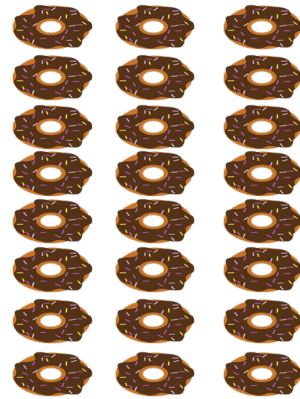
MULTIPLICATION WHEELS



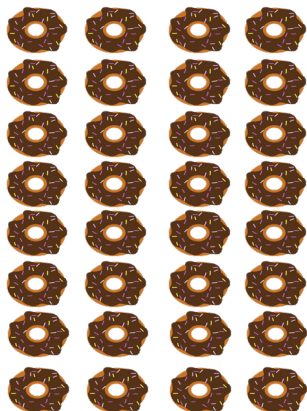
PICTURE FACT FAMILY



$$\begin{array}{r} 8 \\ \times 2 \\ \hline 16 \end{array} \quad \begin{array}{r} 2 \\ \times 8 \\ \hline 16 \end{array} \quad \begin{array}{r} 16 \\ \div 2 \\ \hline 8 \end{array} \quad \begin{array}{r} 16 \\ \div 8 \\ \hline 2 \end{array}$$



$$\begin{array}{r} 8 \\ \times 3 \\ \hline 24 \end{array} \quad \begin{array}{r} 3 \\ \times 8 \\ \hline 24 \end{array} \quad \begin{array}{r} 24 \\ \div 3 \\ \hline 8 \end{array} \quad \begin{array}{r} 24 \\ \div 8 \\ \hline 3 \end{array}$$

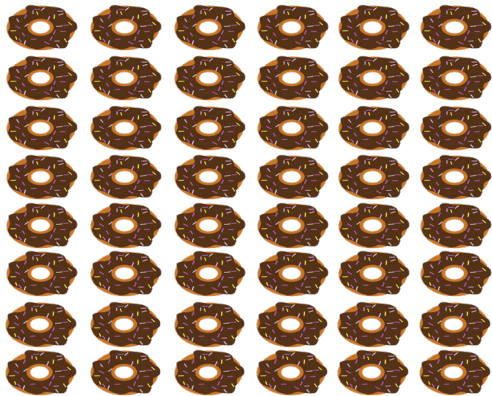


$$\begin{array}{r} 8 \\ \times 4 \\ \hline 32 \end{array} \quad \begin{array}{r} 4 \\ \times 8 \\ \hline 32 \end{array} \quad \begin{array}{r} 32 \\ \div 4 \\ \hline 8 \end{array} \quad \begin{array}{r} 32 \\ \div 8 \\ \hline 4 \end{array}$$



$$\begin{array}{r} 8 \\ \times 5 \\ \hline 40 \end{array} \quad \begin{array}{r} 5 \\ \times 8 \\ \hline 40 \end{array} \quad \begin{array}{r} 40 \\ \div 5 \\ \hline 8 \end{array} \quad \begin{array}{r} 40 \\ \div 8 \\ \hline 5 \end{array}$$

PICTURE FACT FAMILY

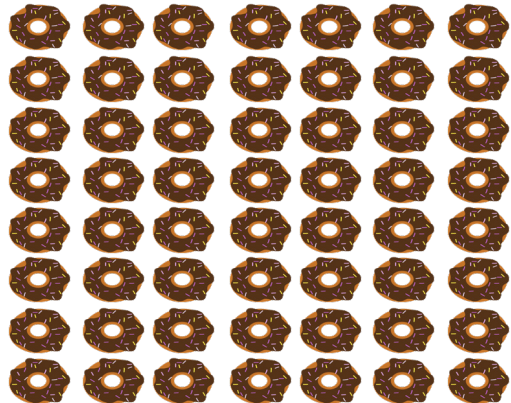


$$\begin{array}{r} 8 \\ \hline 6 \end{array} \times \begin{array}{r} 6 \\ \hline 8 \end{array} = \begin{array}{r} 48 \\ \hline 48 \end{array}$$

$$\begin{array}{r} 6 \\ \hline 48 \end{array} \times \begin{array}{r} 8 \\ \hline 48 \end{array} = \begin{array}{r} 48 \\ \hline 48 \end{array}$$

$$\begin{array}{r} 48 \\ \hline 48 \end{array} \div \begin{array}{r} 6 \\ \hline 8 \end{array} = \begin{array}{r} 8 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 48 \\ \hline 48 \end{array} \div \begin{array}{r} 8 \\ \hline 6 \end{array} = \begin{array}{r} 6 \\ \hline 8 \end{array}$$

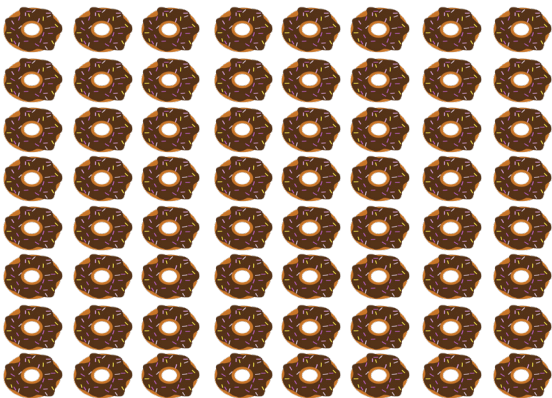


$$\begin{array}{r} 8 \\ \hline 7 \end{array} \times \begin{array}{r} 7 \\ \hline 8 \end{array} = \begin{array}{r} 56 \\ \hline 56 \end{array}$$

$$\begin{array}{r} 7 \\ \hline 56 \end{array} \times \begin{array}{r} 8 \\ \hline 7 \end{array} = \begin{array}{r} 56 \\ \hline 56 \end{array}$$

$$\begin{array}{r} 56 \\ \hline 56 \end{array} \div \begin{array}{r} 7 \\ \hline 8 \end{array} = \begin{array}{r} 8 \\ \hline 7 \end{array}$$

$$\begin{array}{r} 56 \\ \hline 56 \end{array} \div \begin{array}{r} 8 \\ \hline 7 \end{array} = \begin{array}{r} 7 \\ \hline 8 \end{array}$$

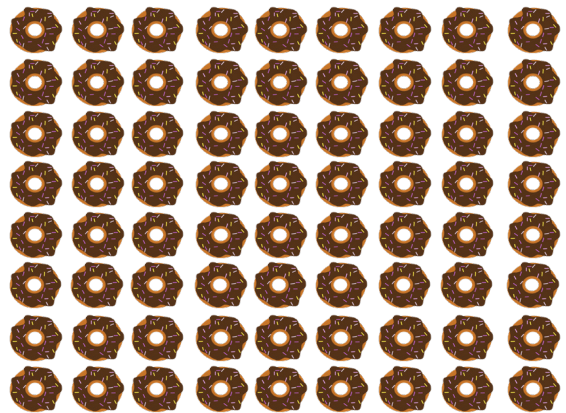


$$\begin{array}{r} 8 \\ \hline 8 \end{array} \times \begin{array}{r} 8 \\ \hline 8 \end{array} = \begin{array}{r} 64 \\ \hline 64 \end{array}$$

$$\begin{array}{r} 8 \\ \hline 64 \end{array} \times \begin{array}{r} 8 \\ \hline 8 \end{array} = \begin{array}{r} 64 \\ \hline 64 \end{array}$$

$$\begin{array}{r} 64 \\ \hline 64 \end{array} \div \begin{array}{r} 8 \\ \hline 8 \end{array} = \begin{array}{r} 8 \\ \hline 8 \end{array}$$

$$\begin{array}{r} 64 \\ \hline 64 \end{array} \div \begin{array}{r} 8 \\ \hline 8 \end{array} = \begin{array}{r} 8 \\ \hline 8 \end{array}$$



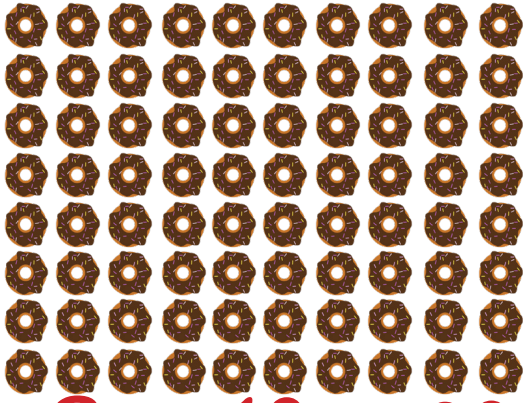
$$\begin{array}{r} 8 \\ \hline 9 \end{array} \times \begin{array}{r} 9 \\ \hline 8 \end{array} = \begin{array}{r} 72 \\ \hline 72 \end{array}$$

$$\begin{array}{r} 9 \\ \hline 72 \end{array} \times \begin{array}{r} 8 \\ \hline 9 \end{array} = \begin{array}{r} 72 \\ \hline 72 \end{array}$$

$$\begin{array}{r} 72 \\ \hline 72 \end{array} \div \begin{array}{r} 9 \\ \hline 8 \end{array} = \begin{array}{r} 8 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 72 \\ \hline 72 \end{array} \div \begin{array}{r} 8 \\ \hline 9 \end{array} = \begin{array}{r} 9 \\ \hline 8 \end{array}$$

PICTURE FACT FAMILY



8 x 10 = 80

10 x 8 = 80

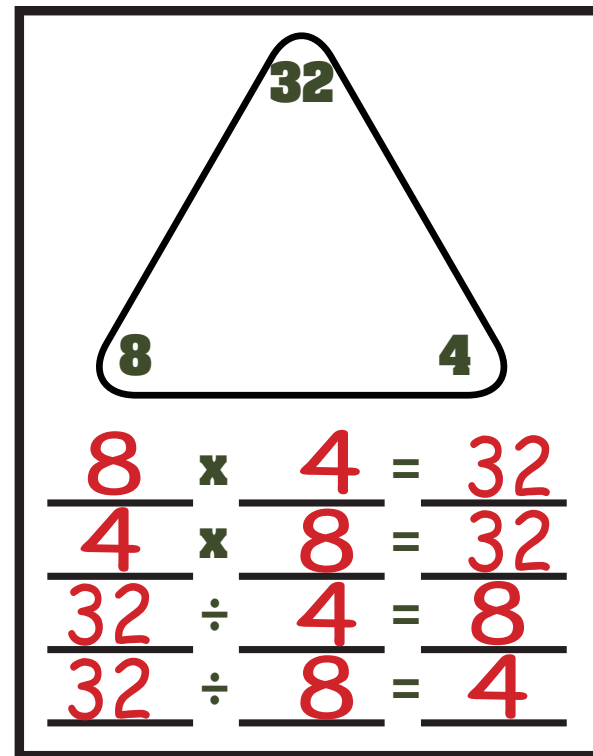
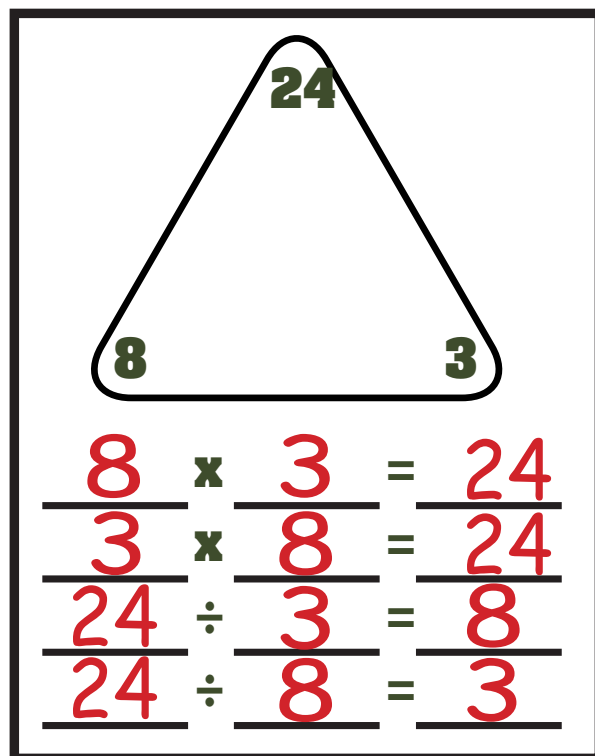
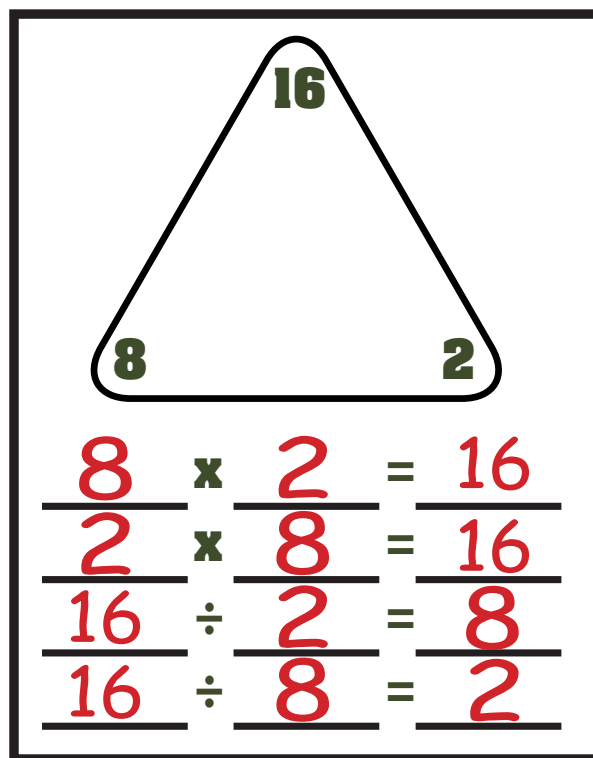
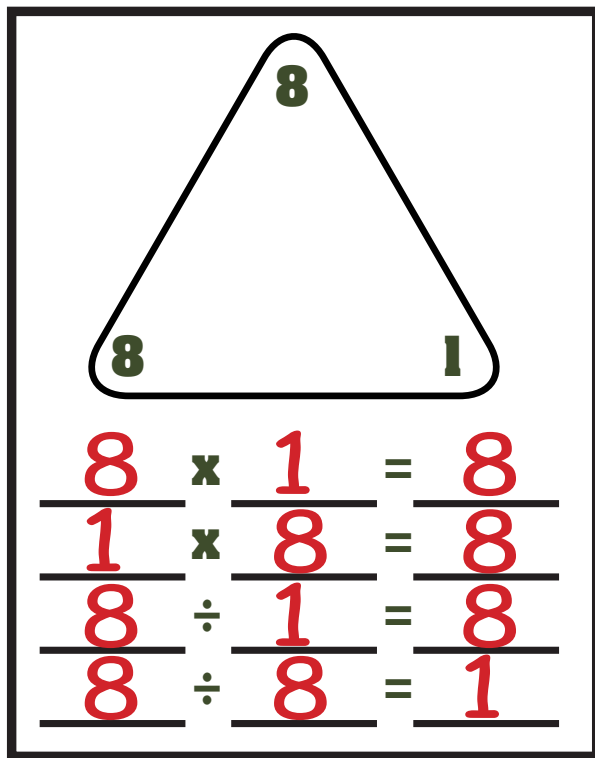
80 ÷ 10 = 8

80 ÷ 8 = 10

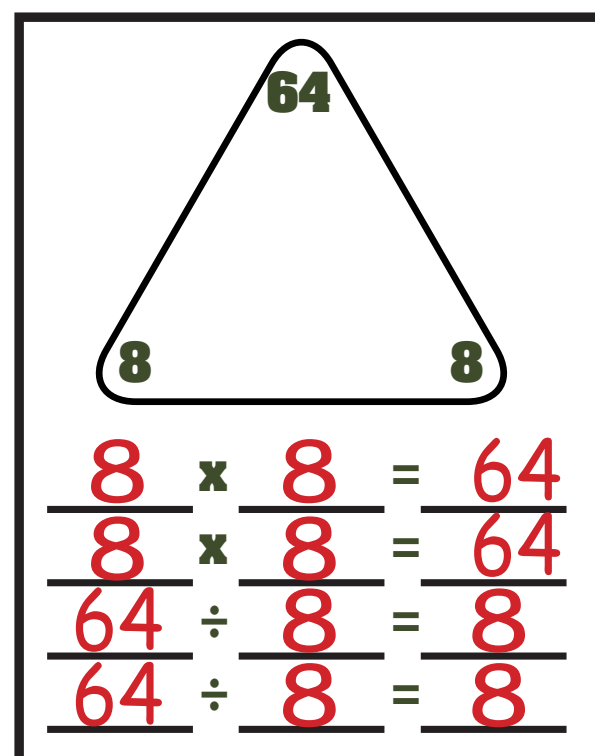
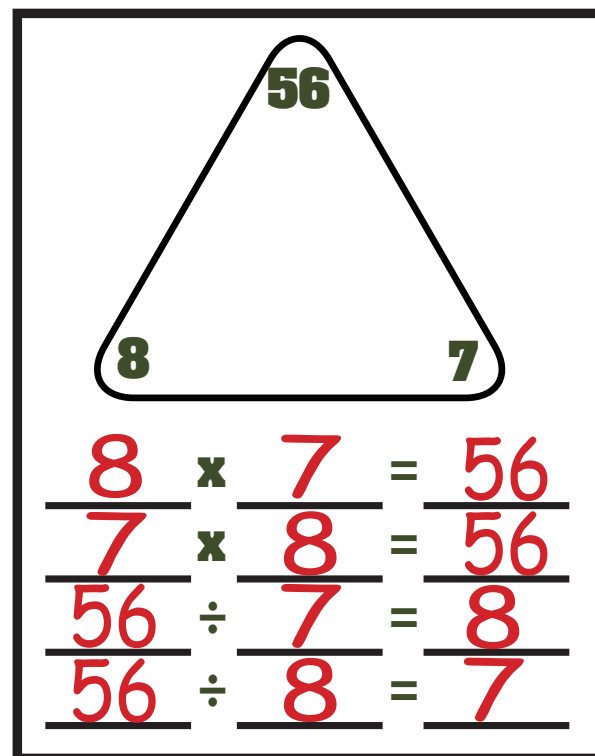
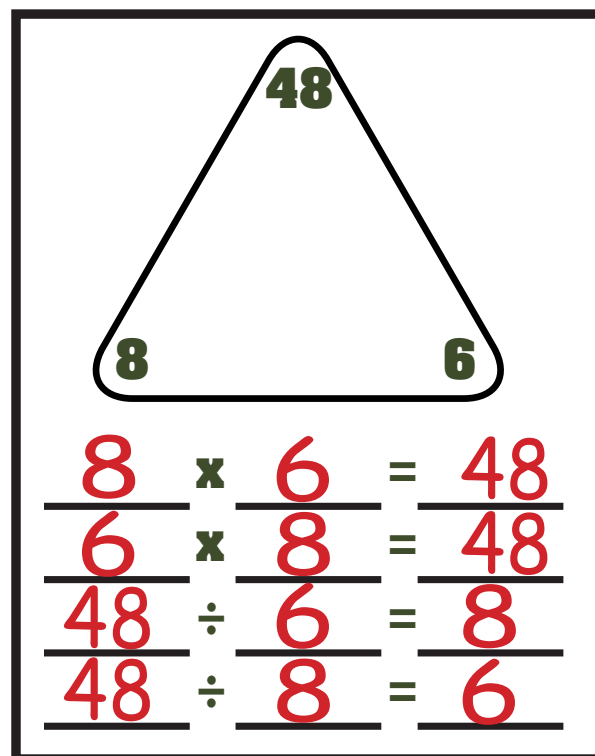
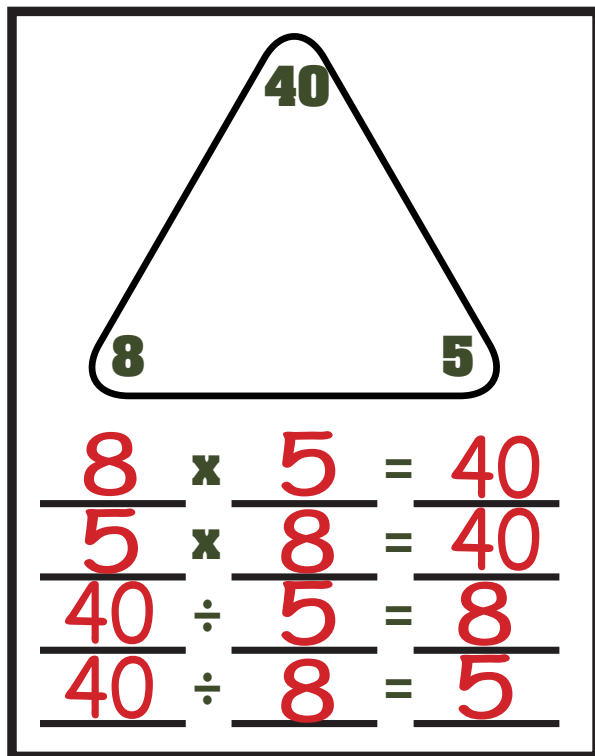
MAKE YOUR OWN

_____	x	_____	=	_____
_____	x	_____	=	_____
_____	÷	_____	=	_____
_____	÷	_____	=	_____

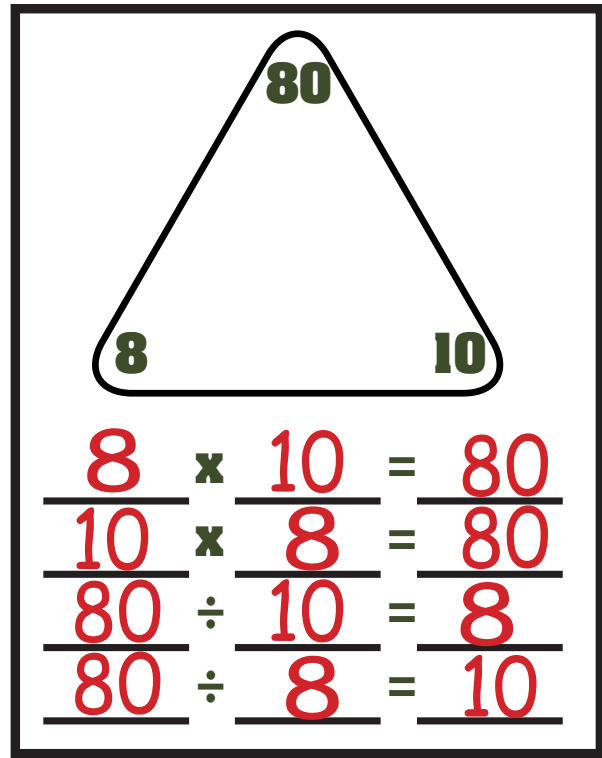
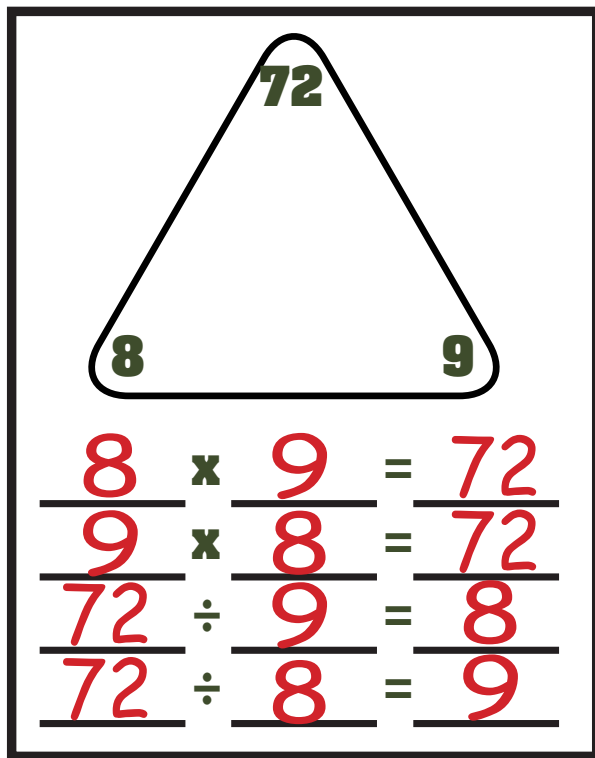
TRIANGLE FACT FAMILY



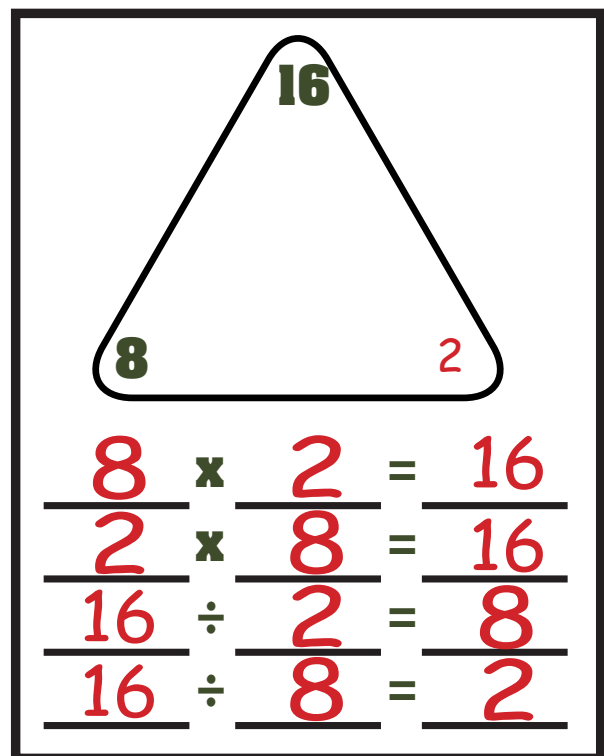
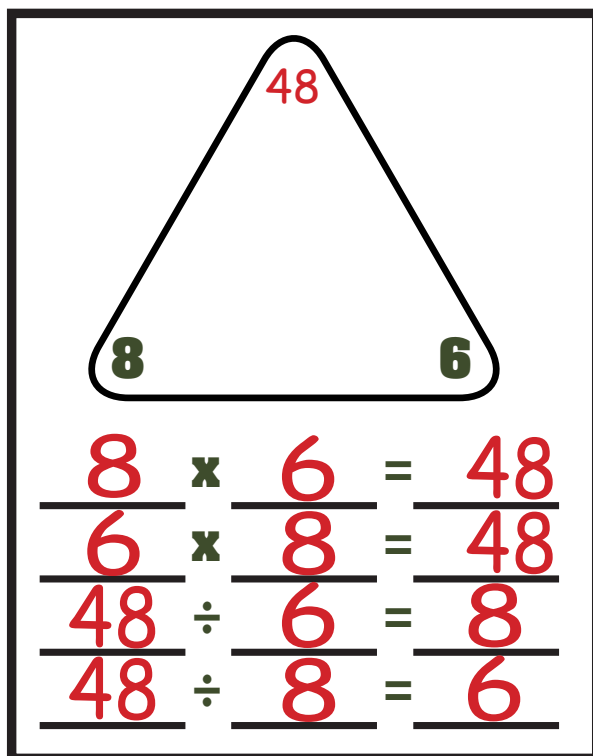
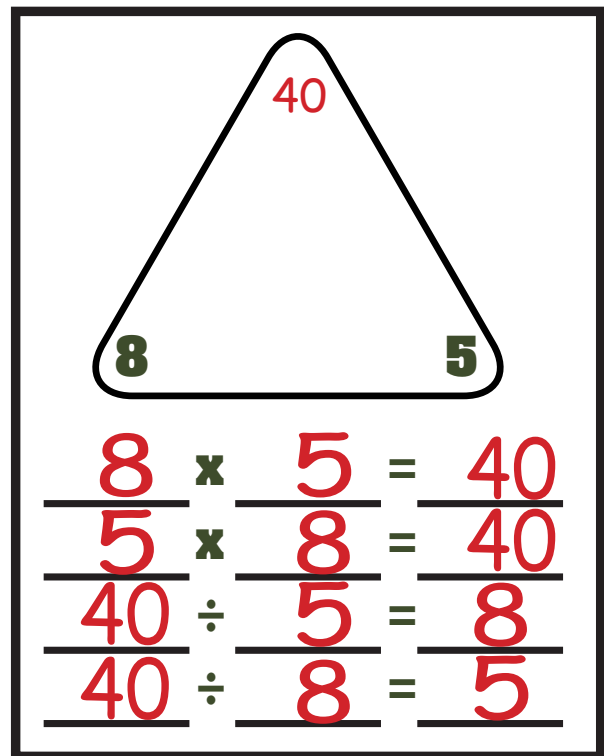
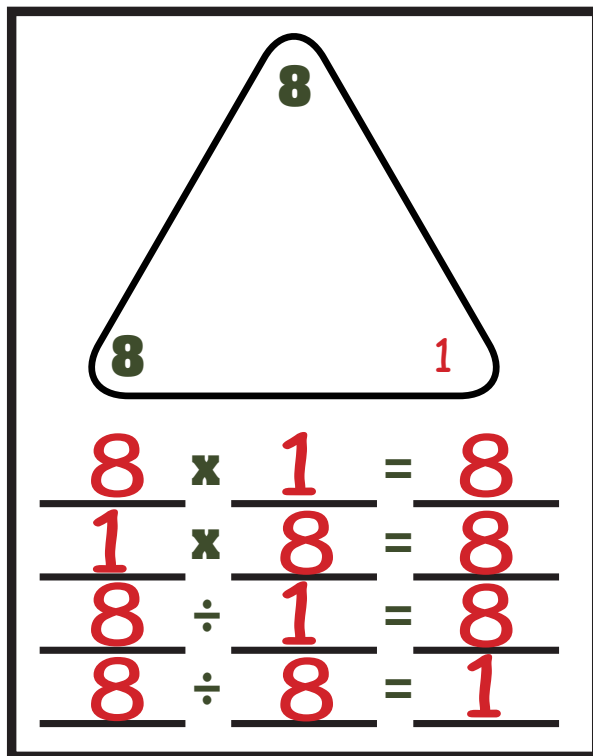
TRIANGLE FACT FAMILY



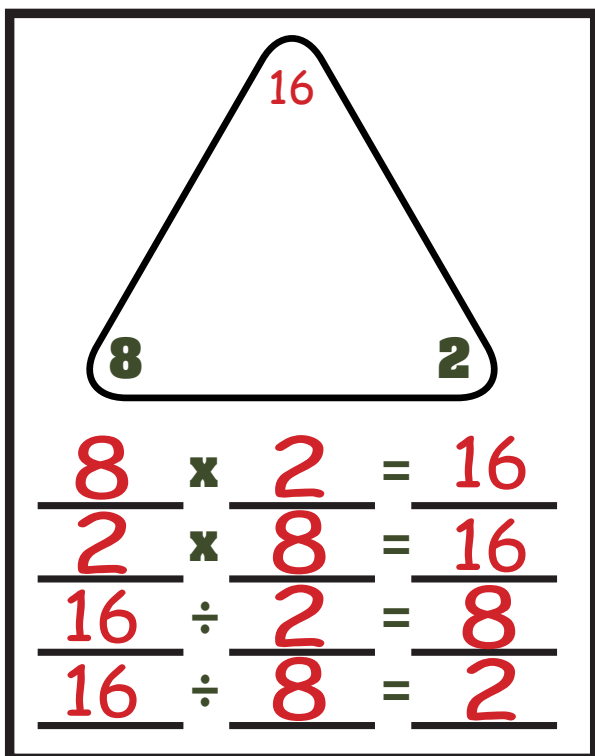
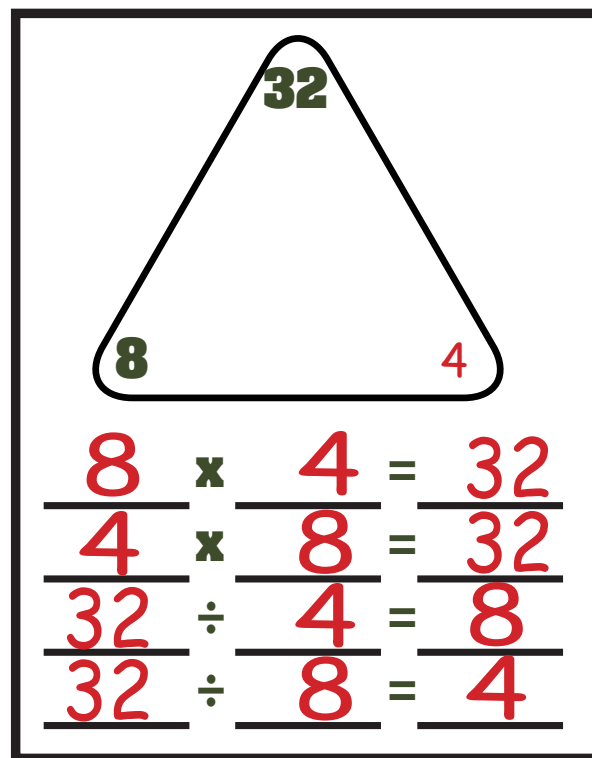
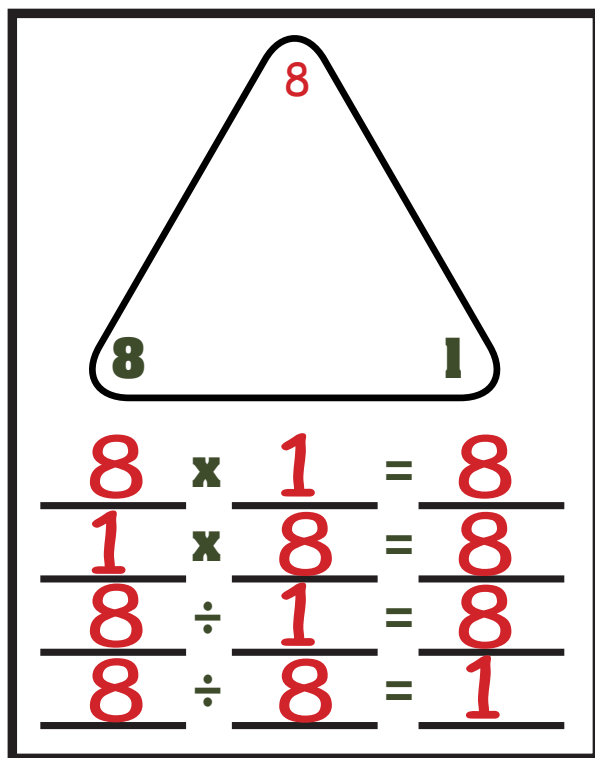
TRIANGLE FACT FAMILY



TRIANGLE FACT FAMILY



TRIANGLE FACT FAMILY



WORD PROBLEM

Write an 8's fact in each box. Then follow the instructions in each box to match the fact.

THE BAKERY HAD 8 ROWS OF DONUTS. THERE WERE 5 DONUTS IN EACH ROW. HOW MANY DONUTS DID THEY HAVE ALTOGETHER?

$$\underline{8} \times \underline{5} = \underline{40}$$

THE BAKERY HAD 8 BOXES WITH 3 DONUTS IN EACH. HOW MANY DONUTS DID THEY HAVE?

$$\underline{8} \times \underline{3} = \underline{24}$$

THERE WERE 8 BAGS OF DONUTS IN THE BAKERY. EACH BAG HAD 7 DONUTS INSIDE. HOW MANY DONUTS WERE THERE ALTOGETHER?

$$\underline{8} \times \underline{7} = \underline{56}$$

THE BAKERY HAD 8 BOXES OF DONUTS WITH 9 DONUTS IN EACH BOX. HOW MANY DONUTS DID THEY HAVE ALTOGETHER?

$$\underline{8} \times \underline{9} = \underline{72}$$

QUIZ

MODEL YOUR THINKING AND SOLVE THE PROBLEM

**I CAN SKIP COUNT
BY 8'S!**

**I CAN REPRESENT 8'S
WITH EQUAL GROUPS!**

**I CAN REPRESENT 8'S
WITH ARRAYS!**

**I CAN REPRESENT 8'S
ON THE NUMBER LINE.**

**I CAN USE REPEATED
ADDITION FOR MY 8'S**

**MY STRATEGY FOR
THINKING ABOUT 8'S IS**

CERTIFICATE

★ GREAT MATH WORK! ★

HAS SUCCESSFULLY PRACTICED THE
8 TIMES TABLES!

GREAT JOB!

TEACHER: _____ DATE: _____

○
8

Multiplication

$$\begin{aligned}8 \times 1 &= 8 \\8 \times 2 &= 16 \\8 \times 3 &= 24 \\8 \times 4 &= 32 \\8 \times 5 &= 40 \\8 \times 6 &= 48 \\8 \times 7 &= 56 \\8 \times 8 &= 64 \\8 \times 9 &= 72 \\8 \times 10 &= 80\end{aligned}$$

Hint: Think Double 4's

○
8

MULTIPLICATION

$$\begin{aligned}8 \times 1 &= 8 \\8 \times 2 &= 16 \\8 \times 3 &= 24 \\8 \times 4 &= 32 \\8 \times 5 &= 40 \\8 \times 6 &= 48 \\8 \times 7 &= 56 \\8 \times 8 &= 64 \\8 \times 9 &= 72 \\8 \times 10 &= 80\end{aligned}$$

Hint: Think Double 4's

○
8

MULTIPLICATION

$$\begin{aligned}8 \times 1 &= 8 \\8 \times 2 &= 16 \\8 \times 3 &= 24 \\8 \times 4 &= 32 \\8 \times 5 &= 40 \\8 \times 6 &= 48 \\8 \times 7 &= 56 \\8 \times 8 &= 64 \\8 \times 9 &= 72 \\8 \times 10 &= 80\end{aligned}$$

Hint: Think Double 4's