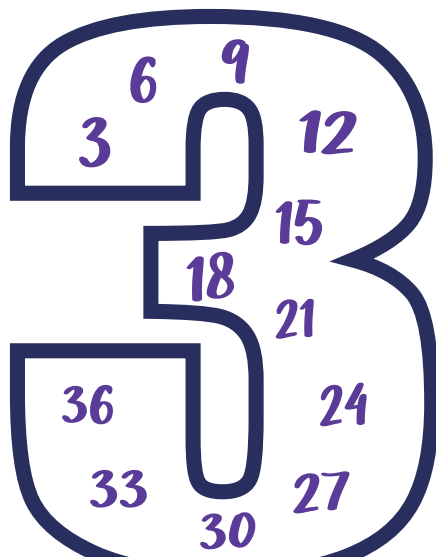


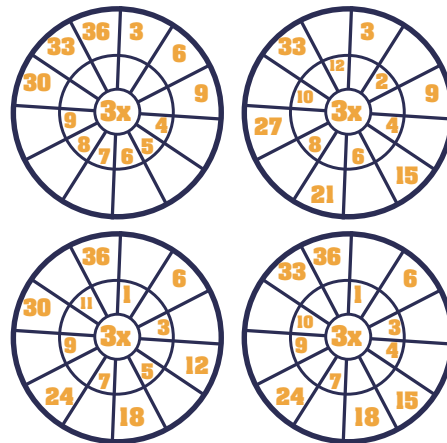
MULTIPLYING by 3

WORK BOOKLET

MULTIPLES OF 3

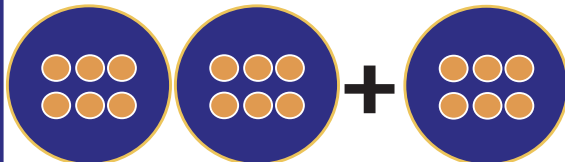


MULTIPLICATION WHEELS



$$3 \times 6 =$$

$$6 + 6 + 6 =$$



Hint: Doubles + 1 more group.

MULTIPLES OF THREE

3  6  9 

12  15  18 

21  24  27 

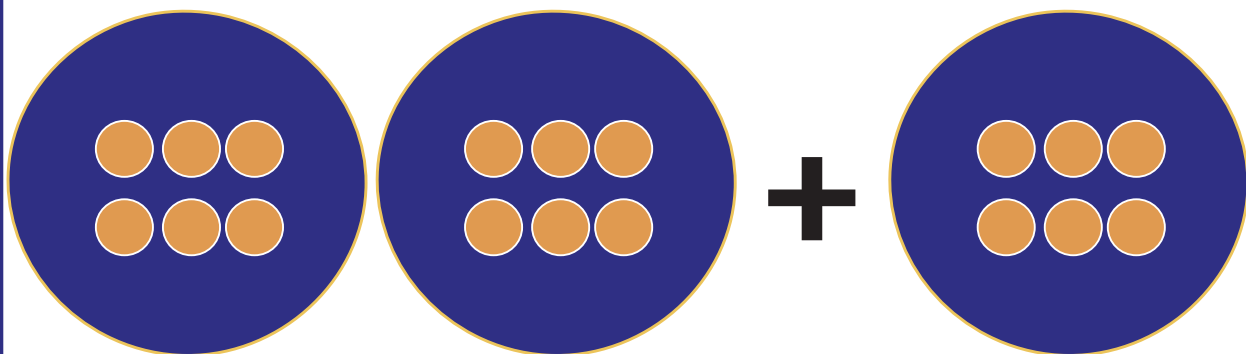
30  33  36 

STRATEGY POSTER

When multiplying by **3**
Doubles plus 1 the Number!

$$3 \times 6 =$$

$$6 + 6 + 6 =$$



Hint: Doubles + 1 more group.

MULTIPLICATION

$$3 \times 5 = 15$$



FACTOR



FACTOR



PRODUCT

MULTIPLES OF THREE

3



6



9



12



15



18



21



24



27



30



33



36



MULTIPLES OF THREE

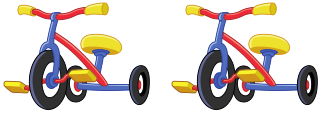
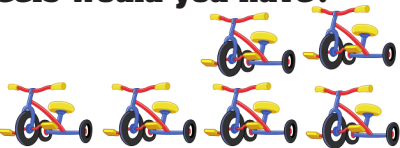

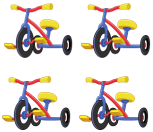

3  6  9 

12  15  18 

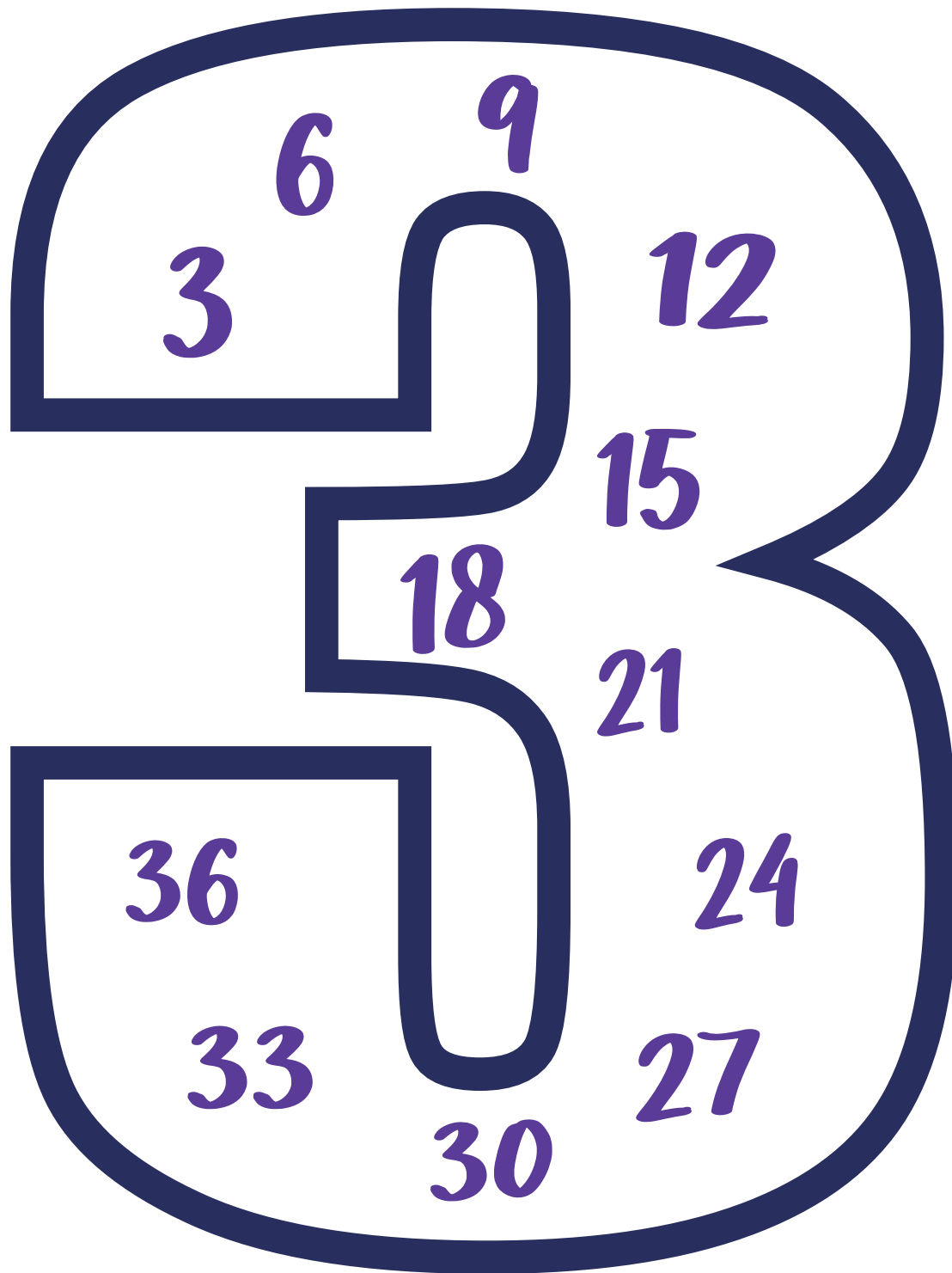
21  24  27 

30  33  36 

PICTURING THE MATH

| GROUP | COUNT BY SEQUENCE | MULTIPLICATION EQUATION |
|--|---------------------|-------------------------|
| <p>If you have 2 tricycles, how many wheels would you have?</p>  | 3, 6 | $3 \times 2 = 6$ |
| <p>If you have 6 tricycles, how many wheels would you have?</p>  | 3, 6, 9, 12, 15, 18 | $3 \times 6 = 18$ |
| <p>If you have 8 tricycles, how many wheels would you have?</p>  | | |
| <p>If you have 4 tricycles, how many wheels would you have?</p>  | | |
| <p>If you have 10 tricycles, how many wheels would you have?</p>  | | |

MULTIPLES OF 3





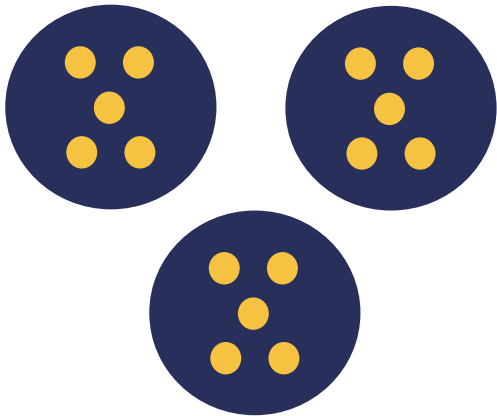
VOCABULARY

COMMUTATIVE PROPERTY

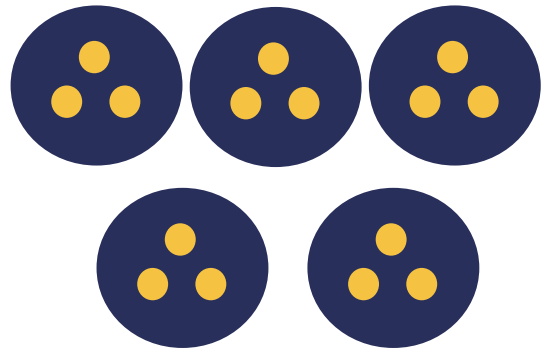
$$3 \times 5$$

=

$$5 \times 3$$



=



MODEL THE FACTS

$$3 \times 4 = 4 \times 3$$

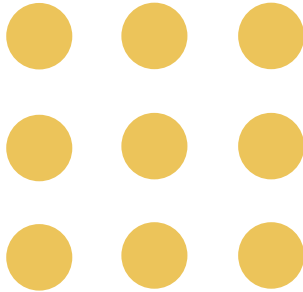


$$3 \times 1 = 1 \times 3$$

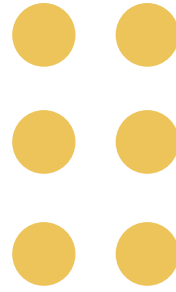


DISTRIBUTIVE PROPERTY

$$3 \times 5$$



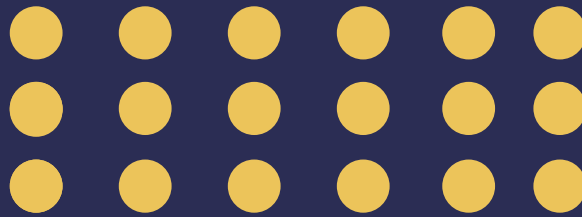
$$3 \times 3$$



$$3 \times 2$$

MODEL THE FACTS

$$3 \times 6 = (_ \times _) + (_ \times _)$$



There are other to ways to model this as well.

ASSOCIATIVE PROPERTY

$$3 \times 3 \times 2$$

$$3 \times 6 \text{ or } 2 \times 9$$

MODEL THE FACTS

$$3 \times 1 \times 3 = \underline{\quad} \times \underline{\quad}$$

$$3 \times 3 \times 3 = \underline{\quad} \times \underline{\quad}$$

$$3 \times 4 \times 3 = \underline{\quad} \times \underline{\quad}$$

These are examples. There are other answers.

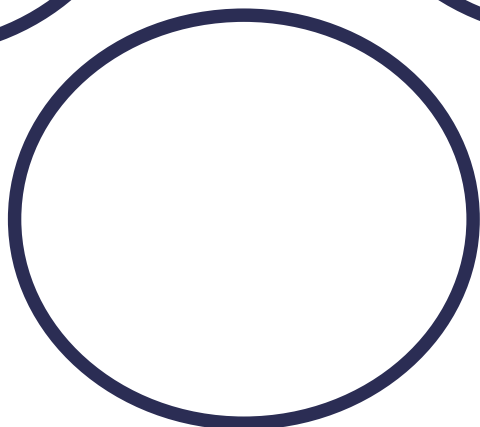
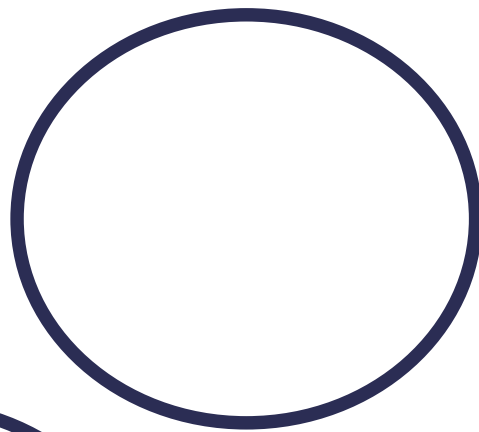
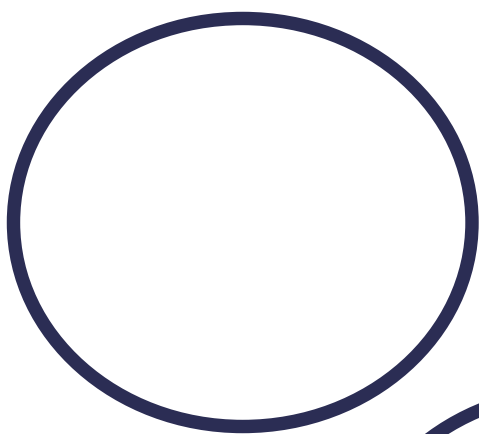
FREE CHOICE

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

ZERO PROPERTY

*When you multiply
by zero you get zero...*

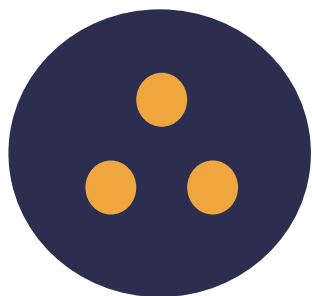
3 groups of **0** is **0**



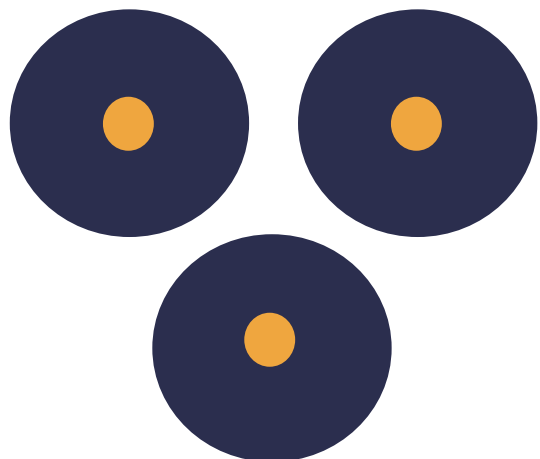
IDENTITY PROPERTY

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

**1 group of
3 is 3**

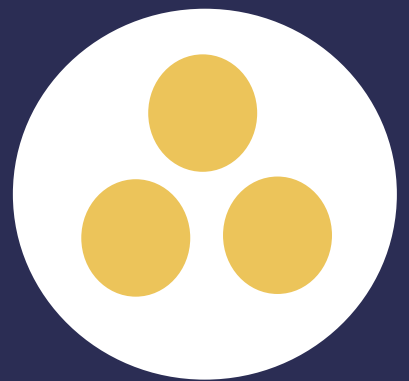
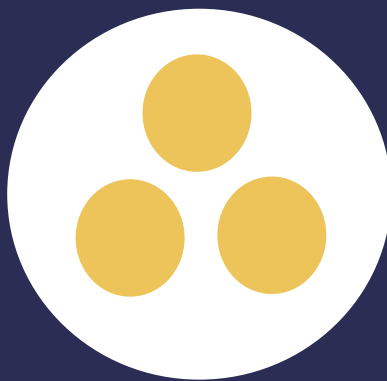
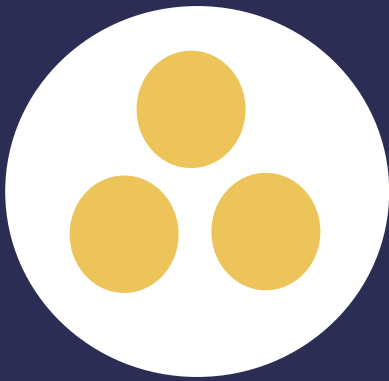


**3 groups
of 1 is 3**



Modeling Multiplication

DRAW EQUAL GROUPS



$$3 \times 3$$

$$3 \times 1$$

$$3 \times 2$$

$$3 \times 3$$

$$3 \times 4$$

Modeling Multiplication

DRAW EQUAL GROUPS

3 X 5

3 X 6

3 X 7

3 X 8

3 X 9

3 X 10

FREE CHOICE

FREE CHOICE

Modeling Multiplication

DRAW AN ARRAY

3 groups of 4

$$3 \times 4 = ?$$

| | | | |
|---|---|---|---|
| ● | ● | ● | ● |
| ● | ● | ● | ● |
| ● | ● | ● | ● |

DRAW AN ARRAY

$$3 \times 1$$

$$3 \times 2$$

$$3 \times 3$$

$$3 \times 4$$

Modeling Multiplication

DRAW AN ARRAY

3 x 5

3 x 6

3 x 7

3 x 8

3 x 9

3 x 10

FREE CHOICE

FREE CHOICE

Multiplication strategies:

REPEATED ADDITION

3 groups of 3

$$3 + 3 + 3 = 9$$



$$3 \times 3 = 9$$

MODEL THE REPEATED ADDITION SENTENCE

$$3 \times 1 =$$
$$1 + 1 + 1$$

$$3 \times 2 =$$
$$2 + 2 + 2$$

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

$$3 \times 4 =$$
$$4 + 4 + 4$$

Multiplication strategies:

REPEATED ADDITION

$$3 \times 5 =$$
$$5 + 5 + 5$$



$$3 \times 6 =$$
$$6 + 6 + 6$$




$$3 \times 7 =$$
$$7 + 7 + 7$$



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



$$3 \times 9 =$$
$$9 + 9 + 9$$



$$3 \times 10 =$$
$$10 + 10 + 10$$



FREE CHOICE



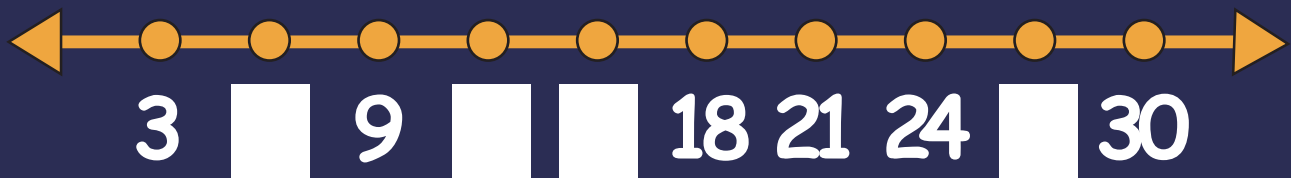
FREE CHOICE



Modeling Multiplication

SKIP COUNTING

DRAW ON A NUMBER LINE



FILL IN THE MISSING NUMBERS



Modeling Multiplication

SKIP COUNTING

FILL IN THE MISSING NUMBERS

| | | | | | | | | | |
|---|--|---|--|----|--|----|--|--|----|
| 3 | | 9 | | 15 | | 21 | | | 30 |
|---|--|---|--|----|--|----|--|--|----|

FILL IN THE MISSING NUMBERS

| | | | | | | | | | |
|--|---|--|----|----|--|----|--|----|--|
| | 6 | | 12 | 15 | | 21 | | 27 | |
|--|---|--|----|----|--|----|--|----|--|

FILL IN THE MISSING NUMBERS

| | | | | | | | | | |
|--|---|--|----|--|----|--|----|--|----|
| | 6 | | 12 | | 18 | | 24 | | 30 |
|--|---|--|----|--|----|--|----|--|----|

FILL IN THE MISSING NUMBERS

| | | | | | | | | | |
|---|--|---|--|----|--|----|--|----|--|
| 3 | | 9 | | 15 | | 21 | | 27 | |
|---|--|---|--|----|--|----|--|----|--|

Modeling Multiplication

SKIP COUNTING

FILL IN THE MISSING NUMBERS. MODEL 3×1 ON THE NUMBER LINE.



FILL IN THE MISSING NUMBERS. MODEL 3×2 ON THE NUMBER LINE.



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



Modeling Multiplication

SKIP COUNTING

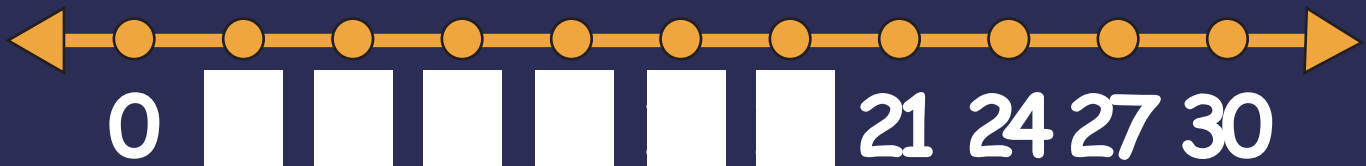
FILL IN THE MISSING NUMBERS. MODEL 3×4 ON THE NUMBER LINE.



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



FILL IN THE MISSING NUMBERS. MODEL 3×6 ON THE NUMBER LINE.



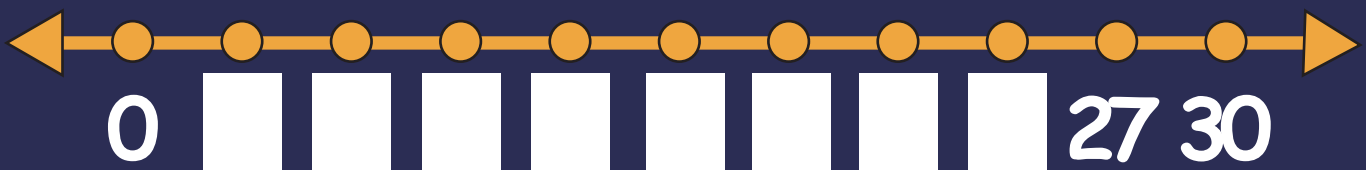
FILL IN THE MISSING NUMBERS. MODEL 3×7 ON THE NUMBER LINE.



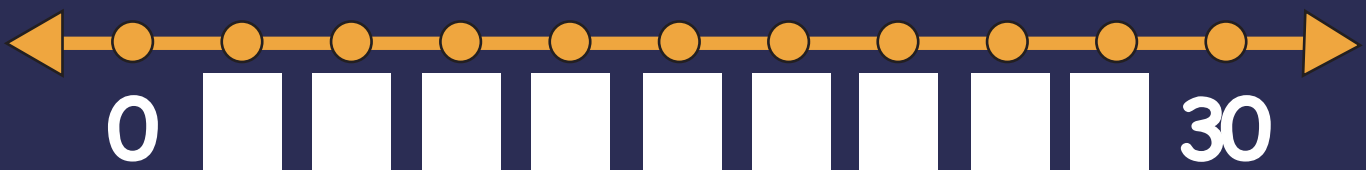
Modeling Multiplication

SKIP COUNTING

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



FILL IN THE MISSING NUMBERS. MODEL 3×9 ON THE NUMBER LINE.

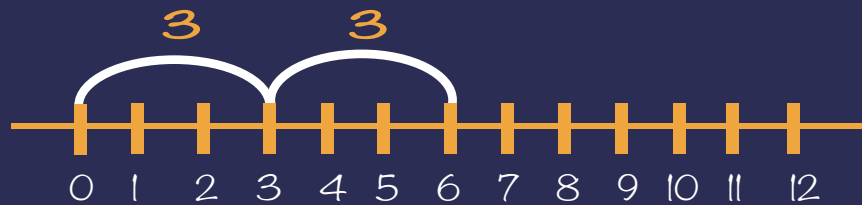


FILL IN THE MISSING NUMBERS. MODEL 3×10 ON THE NUMBER LINE.



Multiplication Strategies:

SKIP COUNTING ON THE NUMBER LINE



$$3 \times 2$$

SOLVE THE PROBLEM ON THE NUMBER LINE

$$3 \times 2$$



$$3 \times 3$$



$$3 \times 4$$



$$3 \times 5$$



SOLVE THE PROBLEM ON THE NUMBER LINE

3×6



3×7



3×8



3×9



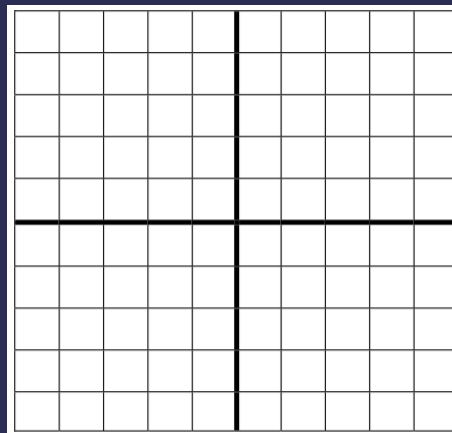
3×10



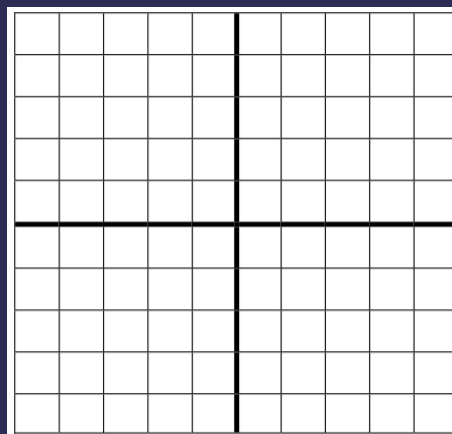
Array Flashcards

MODEL THE PROBLEMS ON THE GRIDS.

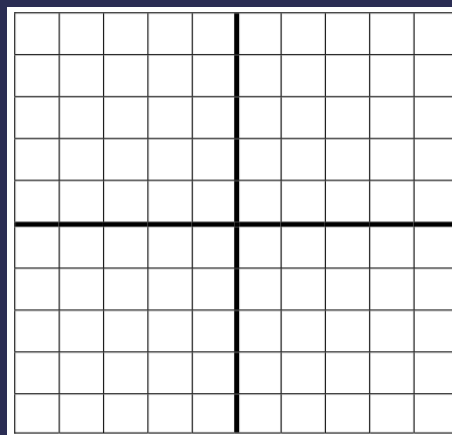
$$3 \times 1 = \underline{\quad}$$



$$3 \times 2 = \underline{\quad}$$



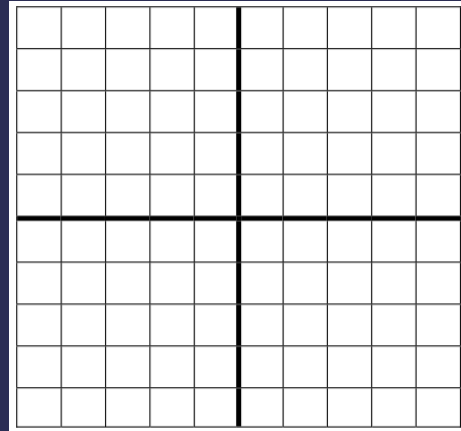
$$3 \times 3 = \underline{\quad}$$



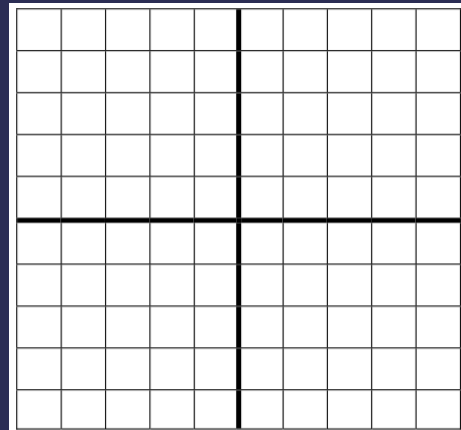
Array Flashcards

MODEL THE PROBLEMS ON THE GRIDS.

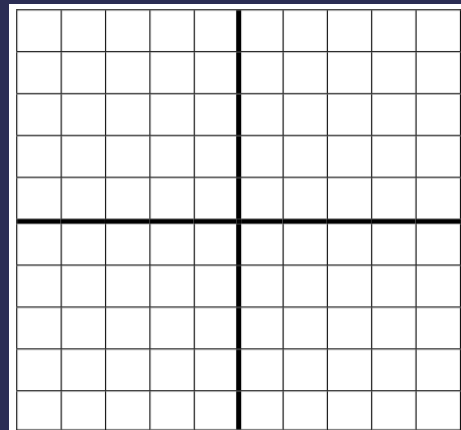
$$3 \times 4 = \underline{\quad}$$



$$3 \times 5 = \underline{\quad}$$



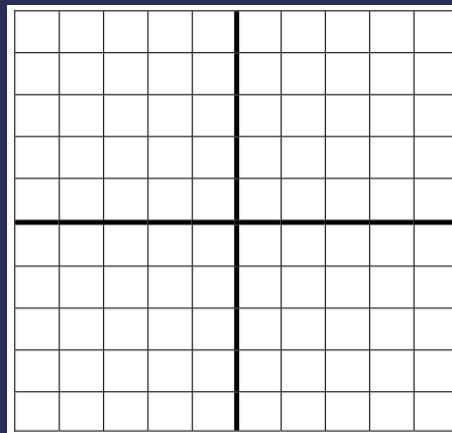
$$3 \times 6 = \underline{\quad}$$



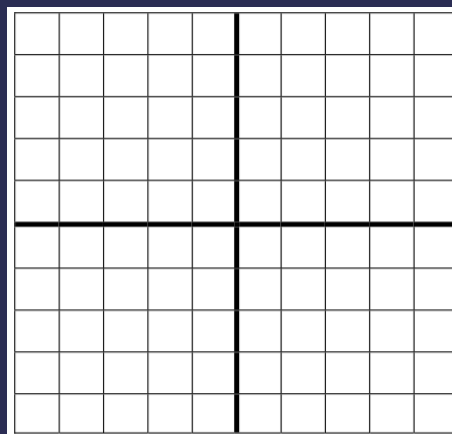
Array Flashcards

MODEL THE PROBLEMS ON THE GRIDS.

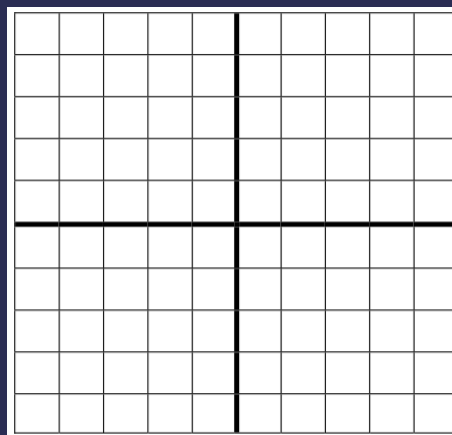
$$3 \times 7 = \underline{\quad}$$



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



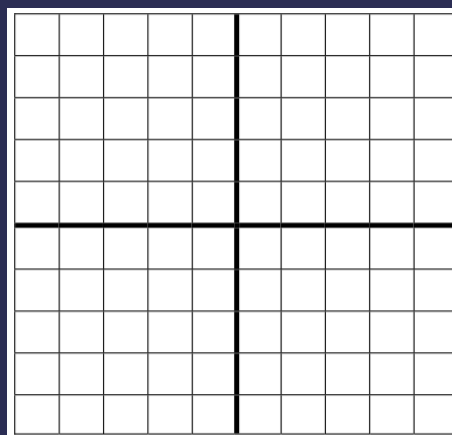
$$3 \times 9 = \underline{\quad}$$



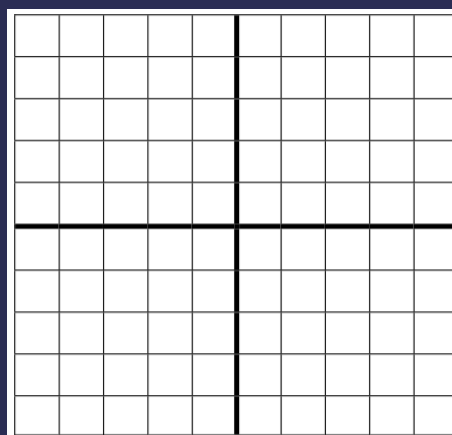
Array Flashcards

MODEL THE PROBLEMS ON THE GRIDS.

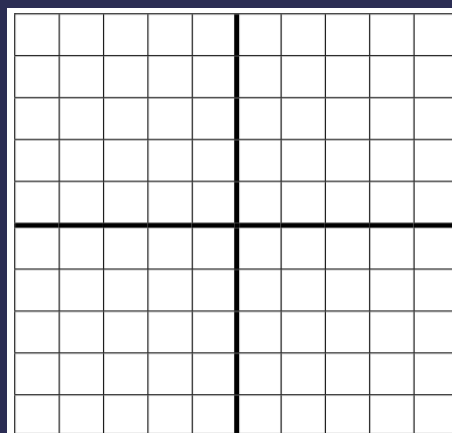
$$3 \times 10 = \underline{\quad}$$



FREE CHOICE



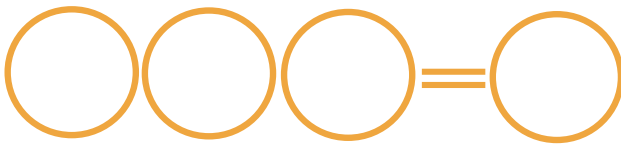
FREE CHOICE



Equal Group Flashcards

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

$$3 \times 0 = 0$$



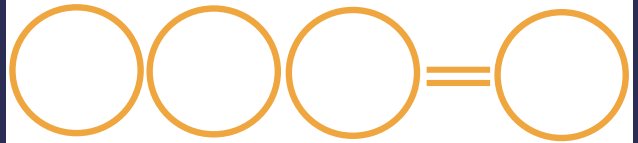
$$3 \times 1 = 3$$



$$3 \times 2 = 6$$



$$3 \times 3 = 9$$



$$3 \times 4 = 12$$



$$3 \times 5 = 15$$



Equal Group Flashcards

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

$$3 \times 6 = 18$$



$$3 \times 7 = 21$$



$$3 \times 8 = 24$$



$$3 \times 9 = 27$$



$$3 \times 10 = 30$$



Regular Flashcards


$$3 \times 0$$


$$3 \times 1$$


$$3 \times 2$$


$$3 \times 3$$


$$3 \times 4$$


$$3 \times 5$$

Regular Flashcards



A rectangular flashcard with a black border. The top portion is a solid black rectangle. Below it, the equation 3×6 is written in a large, bold, black font.

$$3 \times 6$$



A rectangular flashcard with a black border. The top portion is a solid black rectangle. Below it, the equation 3×7 is written in a large, bold, black font.

$$3 \times 7$$



A rectangular flashcard with a black border. The top portion is a solid black rectangle. Below it, the equation 3×8 is written in a large, bold, black font.

$$3 \times 8$$



A rectangular flashcard with a black border. The top portion is a solid black rectangle. Below it, the equation 3×9 is written in a large, bold, black font.

$$3 \times 9$$

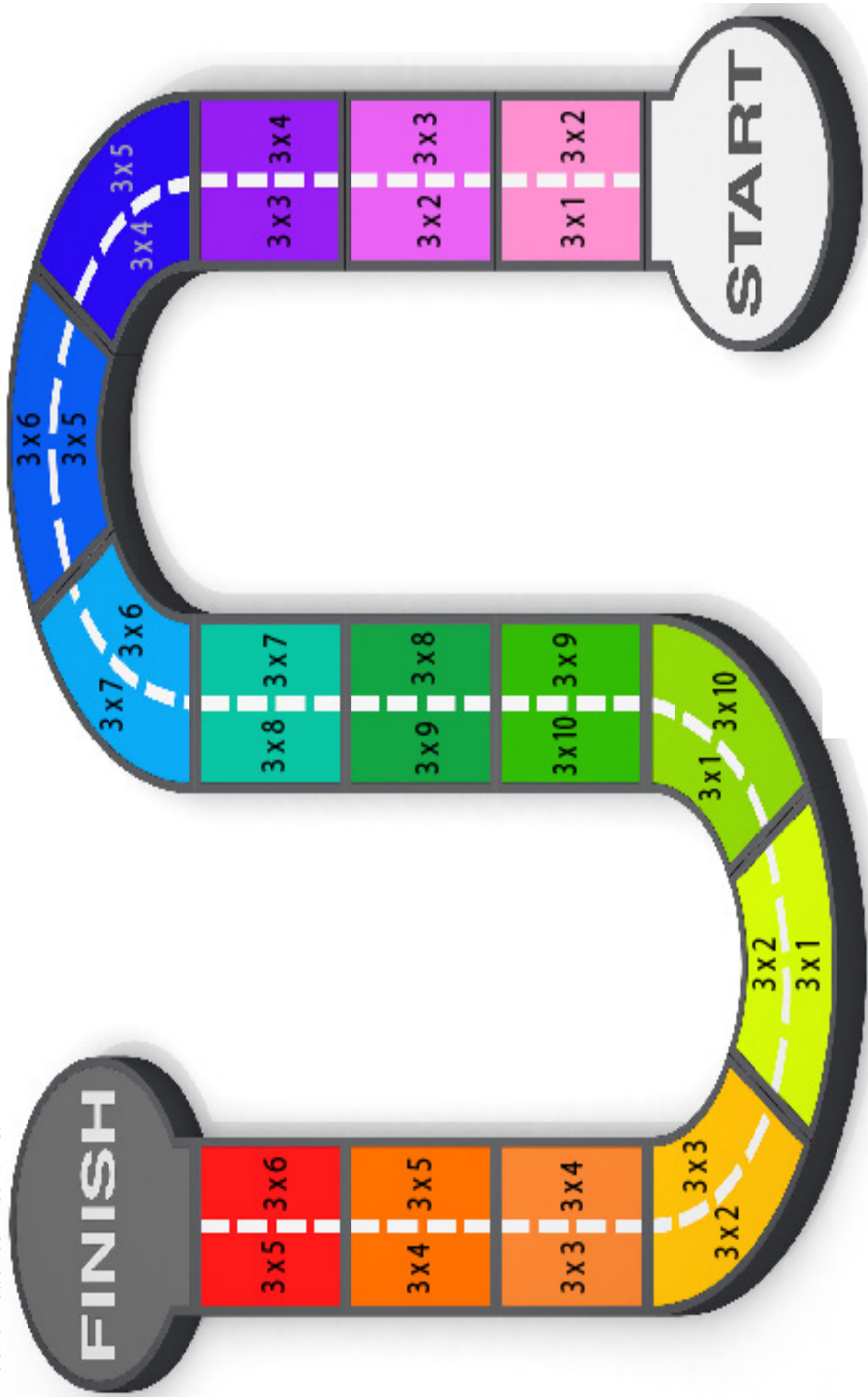


A rectangular flashcard with a black border. The top portion is a solid black rectangle. Below it, the equation 3×10 is written in a large, bold, black font.

$$3 \times 10$$

MULTIPLICATION RACE

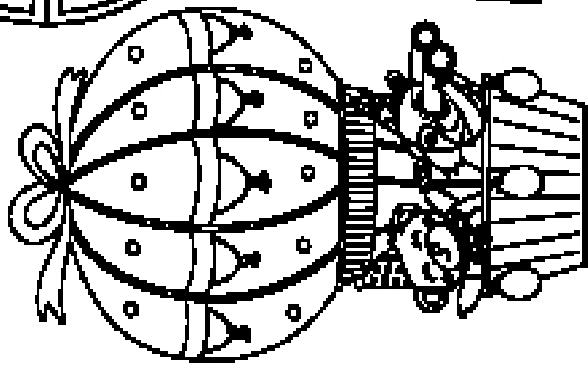
Directions: Play with a partner. Each player chooses a marker and a side. Decide who starts. Roll the die. Take turns moving. Player 1 says the product. Player 2 checks the answer using the bookmark. If it is correct, stay on the spot. If it is incorrect, move back one. Whoever reaches first wins.



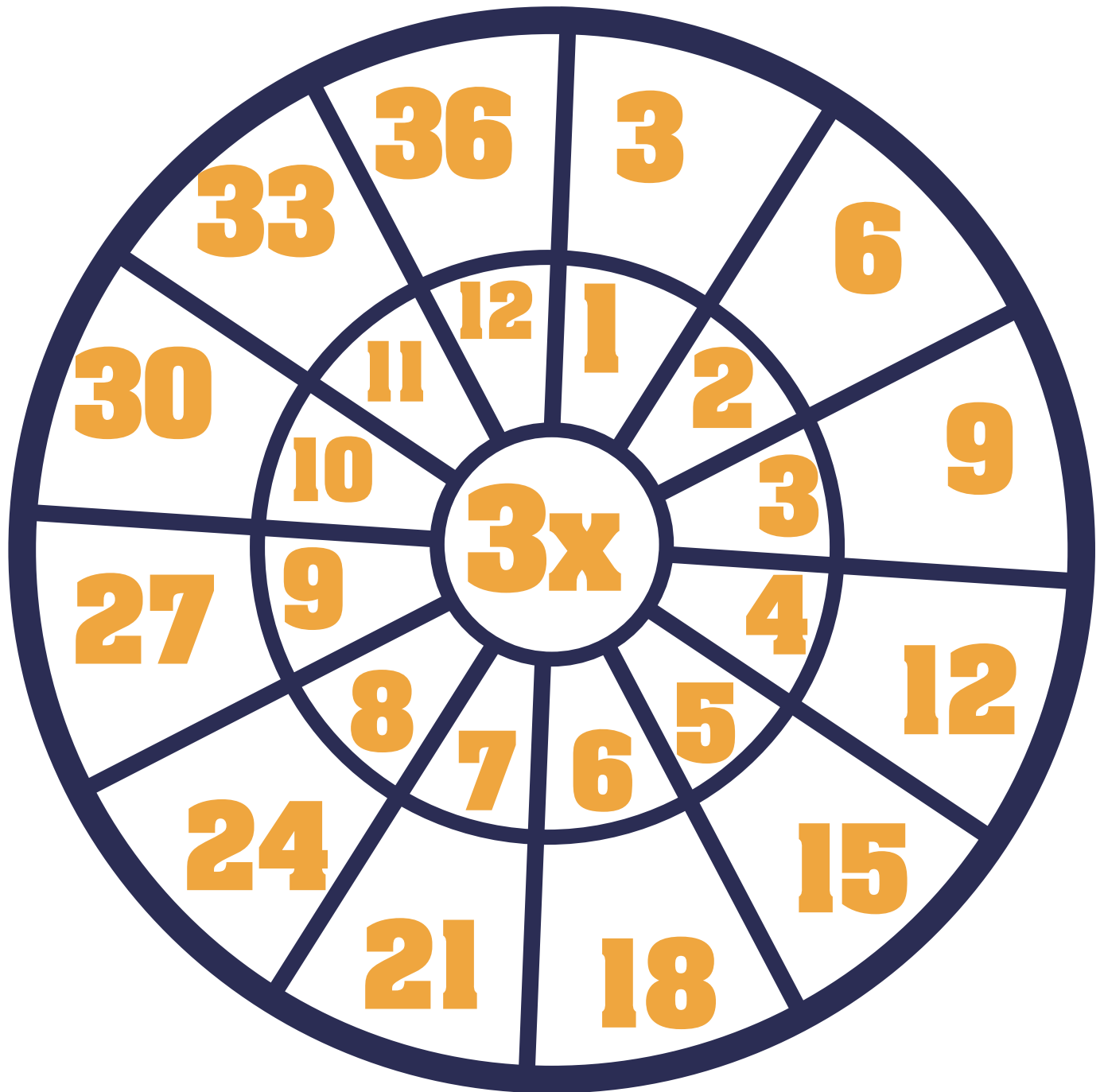


Help the animals get to the bunch of balloons

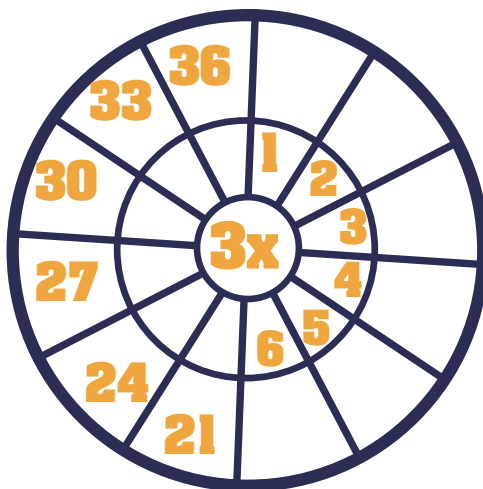
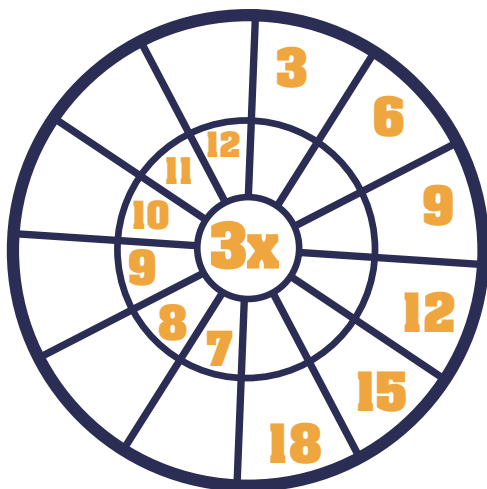
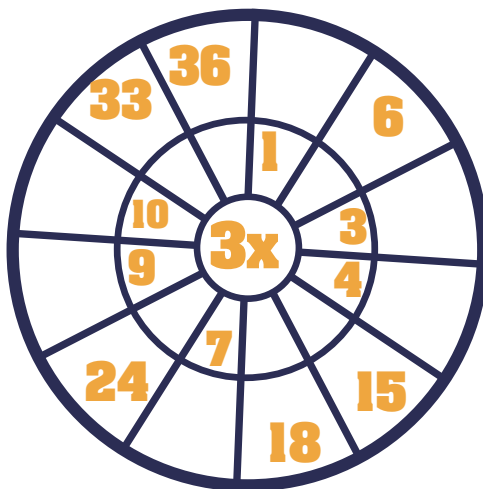
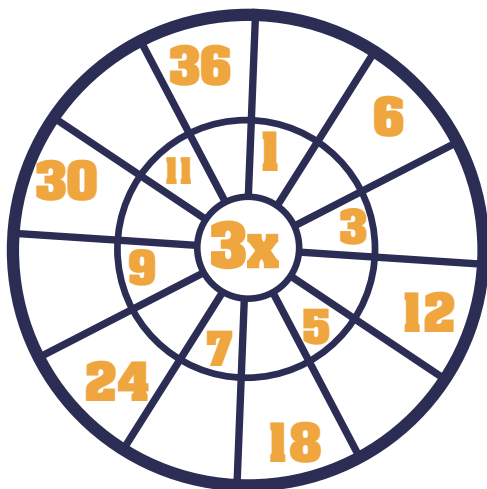
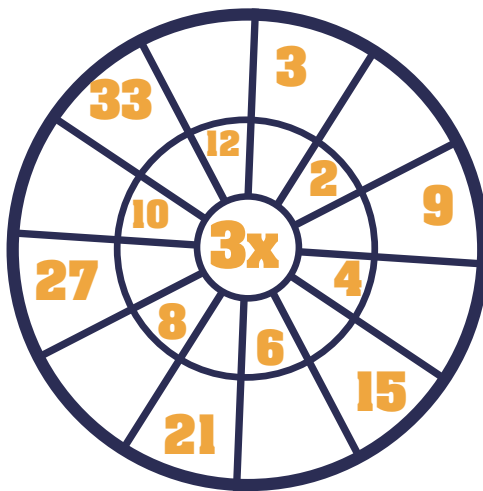
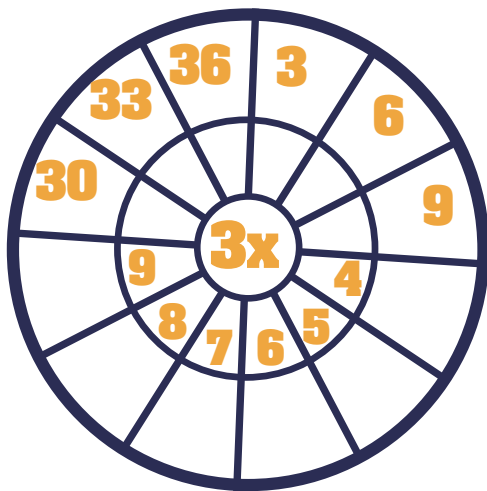
BALLOON RACE



MULTIPLICATION WHEELS



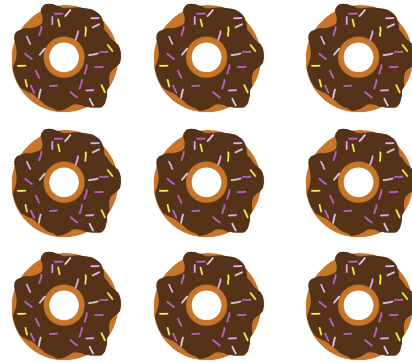
MULTIPLICATION WHEELS



PICTURE FACT FAMILY



$$\begin{array}{rcl} \underline{\hspace{1cm}} & \times & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} & \times & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} & \div & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} & \div & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \end{array}$$



$$\begin{array}{rcl} \underline{\hspace{1cm}} & \times & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} & \times & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} & \div & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} & \div & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \end{array}$$



$$\begin{array}{rcl} \underline{\hspace{1cm}} & \times & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} & \times & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} & \div & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} & \div & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \end{array}$$



$$\begin{array}{rcl} \underline{\hspace{1cm}} & \times & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} & \times & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} & \div & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} & \div & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \end{array}$$

PICTURE FACT FAMILY



$$\begin{array}{rcl} \underline{\hspace{1cm}} & \times & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} & \times & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} & \div & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} & \div & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \end{array}$$



$$\begin{array}{rcl} \underline{\hspace{1cm}} & \times & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} & \times & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} & \div & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} & \div & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \end{array}$$




$$\begin{array}{rcl} \underline{\hspace{1cm}} & \times & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} & \times & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} & \div & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} & \div & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \end{array}$$



$$\begin{array}{rcl} \underline{\hspace{1cm}} & \times & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} & \times & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} & \div & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} & \div & \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \end{array}$$

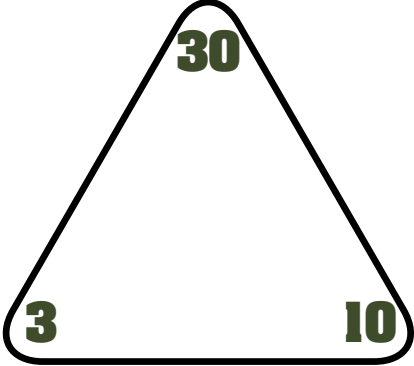
PICTURE FACT FAMILY

| | | | | | | | | | |
|--|---|-------|---|-------|--|--|--|--|--|
|  | | | | | | | | | |
| _____ | x | _____ | = | _____ | | | | | |
| _____ | x | _____ | = | _____ | | | | | |
| _____ | ÷ | _____ | = | _____ | | | | | |
| _____ | ÷ | _____ | = | _____ | | | | | |

MAKE YOUR OWN

| | | | | |
|-------|---|-------|---|-------|
| _____ | x | _____ | = | _____ |
| _____ | x | _____ | = | _____ |
| _____ | ÷ | _____ | = | _____ |
| _____ | ÷ | _____ | = | _____ |

TRIANGLE FACT FAMILY



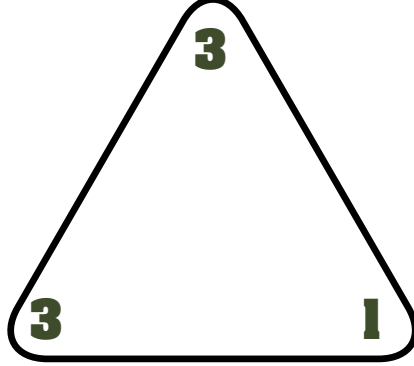
A triangle with vertices labeled 3 (bottom-left), 10 (bottom-right), and 30 (top).

\times =

 \times =

 \div =

 \div =



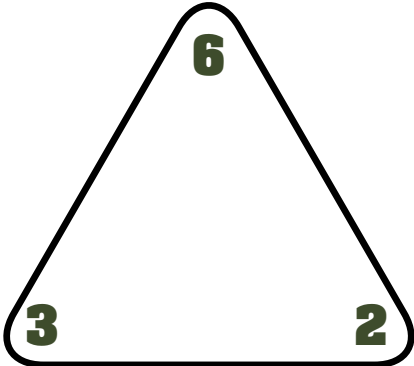
A triangle with vertices labeled 3 (bottom-left), 1 (bottom-right), and 3 (top).

\times =

 \times =

 \div =

 \div =



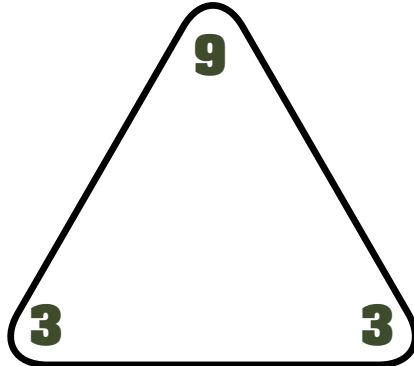
A triangle with vertices labeled 3 (bottom-left), 2 (bottom-right), and 6 (top).

\times =

 \times =

 \div =

 \div =



A triangle with vertices labeled 3 (bottom-left), 3 (bottom-right), and 9 (top).

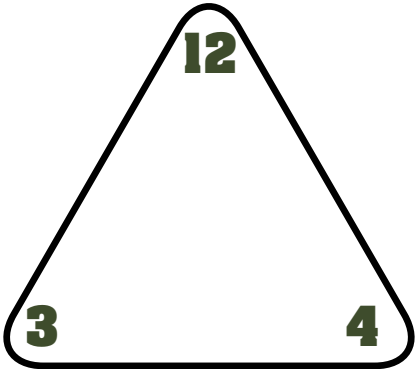
\times =

 \times =

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TRIANGLE FACT FAMILY

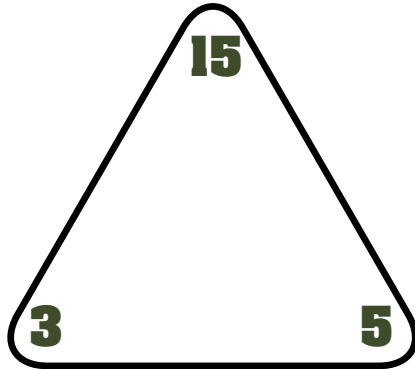


\times =

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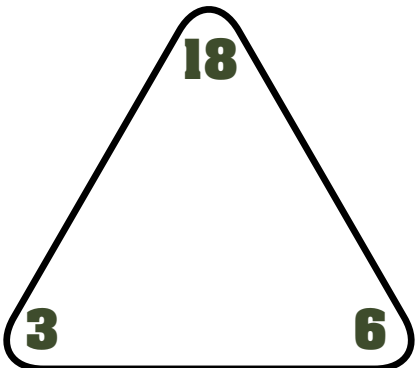


\times =

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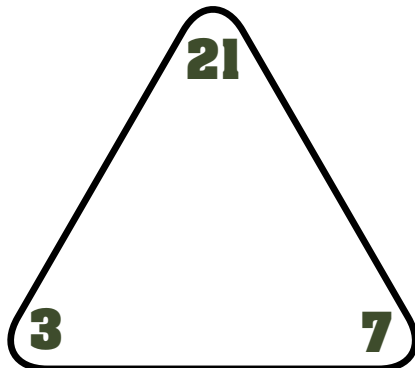


\times =

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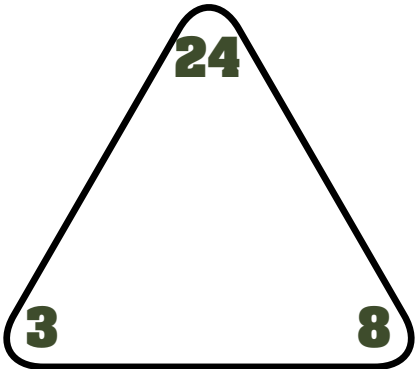
\times =

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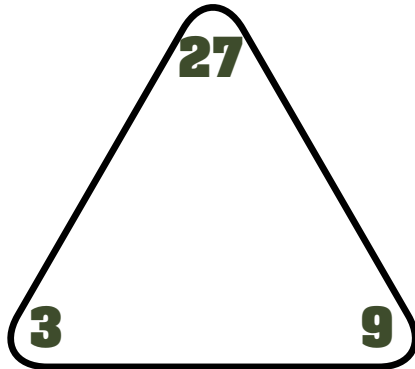
 \div =

TRIANGLE FACT FAMILY



A triangle with the number 24 at the top vertex, 3 at the bottom-left vertex, and 8 at the bottom-right vertex.

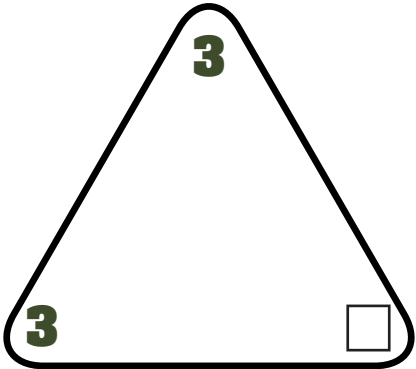
| | | | | |
|-------|----------|-------|---|-------|
| _____ | x | _____ | = | _____ |
| _____ | x | _____ | = | _____ |
| _____ | ÷ | _____ | = | _____ |
| _____ | ÷ | _____ | = | _____ |



A triangle with the number 27 at the top vertex, 3 at the bottom-left vertex, and 9 at the bottom-right vertex.

| | | | | |
|-------|----------|-------|---|-------|
| _____ | x | _____ | = | _____ |
| _____ | x | _____ | = | _____ |
| _____ | ÷ | _____ | = | _____ |
| _____ | ÷ | _____ | = | _____ |

TRIANGLE FACT FAMILY

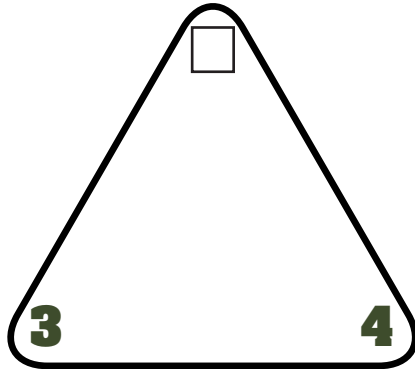


\times =

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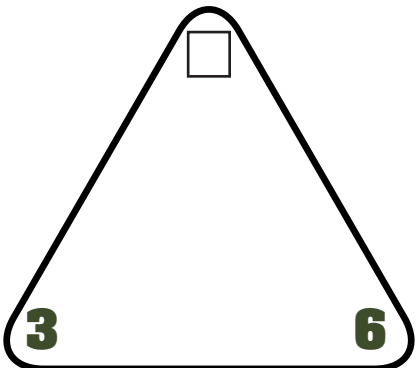


\times =

 \times =

 \div =

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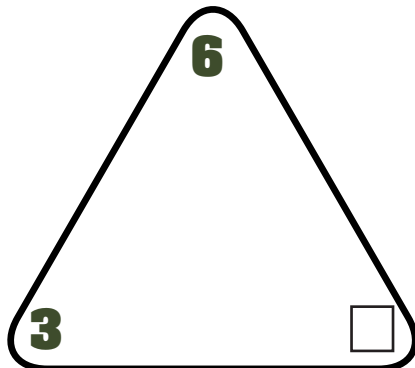


\times =

 \times =

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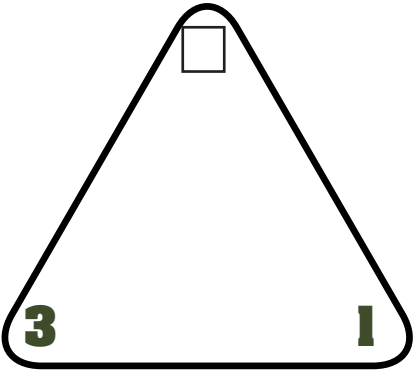
\times =

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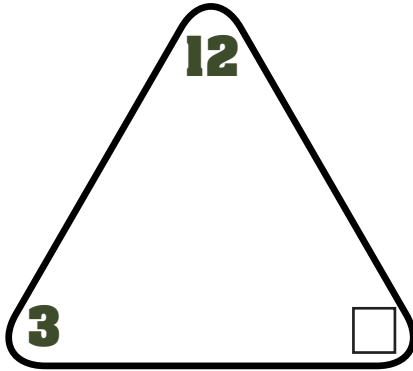
 \div =

 \div =

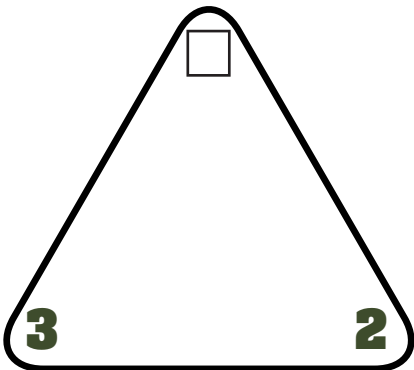
TRIANGLE FACT FAMILY



$\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$
 $\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$
 $\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$
 $\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$



$\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$
 $\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$
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 $\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$



$\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$
 $\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$
 $\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$
 $\underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

WORD PROBLEM

MODEL YOUR THINKING AND SOLVE THE PROBLEM

THE BAKERY HAD 3 ROWS OF DONUTS. THERE WERE 5 DONUTS IN EACH ROW. HOW MANY DONUTS DID THEY HAVE ALTOGETHER?

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

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

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

THERE WERE 3 BAGS OF DONUTS IN THE BAKERY. EACH BAG HAD 10 DONUTS INSIDE. HOW MANY DONUTS WERE THERE ALTOGETHER?

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

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

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

QUIZ

WRITE A 3'S FACT IN EACH BOX. THEN FOLLOW THE INSTRUCTIONS IN EACH BOX TO MATCH THE FACT.

**I CAN SKIP COUNT
BY 3'S!**

**I CAN REPRESENT 3'S
WITH EQUAL GROUPS!**

**I CAN REPRESENT 3'S
WITH ARRAYS!**

**I CAN REPRESENT 3'S
ON THE NUMBER LINE.**

**I CAN USE REPEATED
ADDITION FOR MY 3'S.**

**MY STRATEGY FOR
THINKING ABOUT 3'S IS...**

CERTIFICATE

★ **GREAT MATH WORK!** ★

HAS SUCCESSFULLY PRACTICED THE
3 TIMES TABLES!

GREAT JOB!

TEACHER: _____ DATE: _____

3

Multiplication

$$3 \times 1 = 3$$

$$3 \times 2 = 6$$

$$3 \times 3 = 9$$

$$3 \times 4 = 12$$

$$3 \times 5 = 15$$

$$3 \times 6 = 18$$

$$3 \times 7 = 21$$

$$3 \times 8 = 24$$

$$3 \times 9 = 27$$

$$3 \times 10 = 30$$

$$3 \times 11 = 33$$

$$3 \times 12 = 36$$

Hint: Doubles + 1
more group

3

MULTIPLICATION

$$3 \times 1 = 3$$

$$3 \times 2 = 6$$

$$3 \times 3 = 9$$

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$$3 \times 5 = 15$$

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Hint: Doubles + 1
more group