



WATCH ME FIRST!



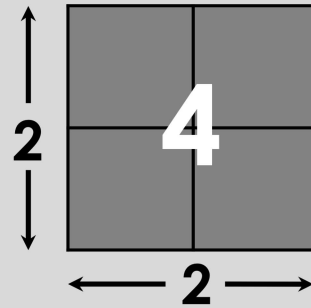
WHAT'S A SQUARE NUMBER?

When we multiply a whole number by itself, the result is a square number.

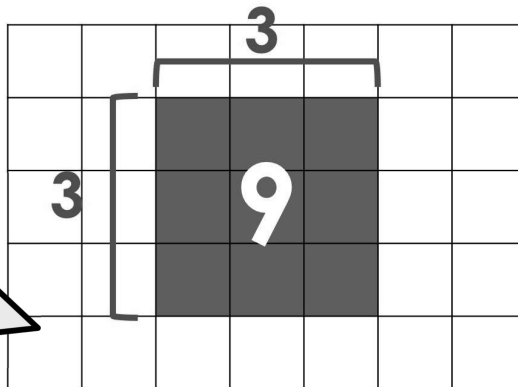
EXAMPLE:

2 groups of 2 or $2 \times 2 = 4$

The number **4** is a **square number**.



Pam baked a large brownie for her family. She cut it into smaller squares: 3 squares in width by 3 squares in length. How many square pieces will she have? Solve using a model.

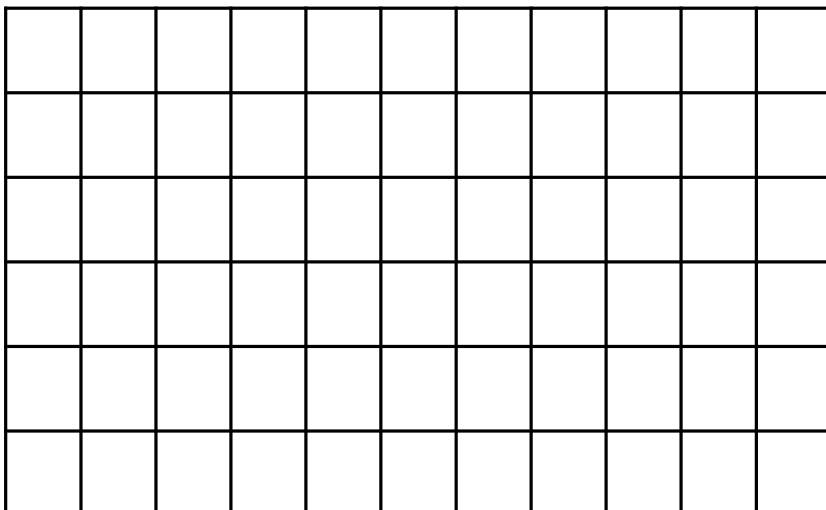


Square Facts	Multiplication Fact	Square Number
	2×2	$= 4$
		$=$

There are 9 square pieces in all.
9 is a **square number**!

LET'S WORK TOGETHER!

1) Let's find the product of 4×4 . Draw a model to solve and record the matching fact.

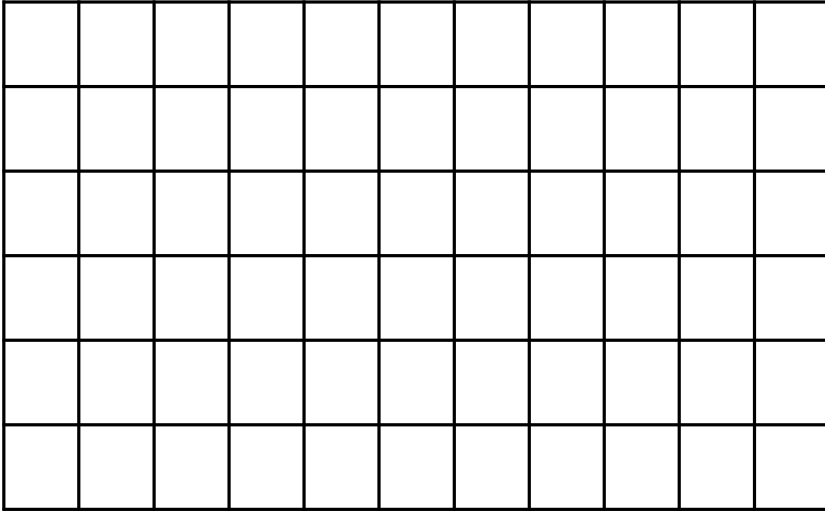


Square Facts	Multiplication Fact	Square Number
	2×2	$= 4$
	3×3	$=$



LET'S WORK TOGETHER! (continued)

2) Use the graph paper to find the product of 5×5 . Draw a model to solve and record the matching fact.



Square Facts	Multiplication Fact	Square Number
	$2 \times 2 =$	4
	$3 \times 3 =$	
	$4 \times 4 =$	

3) Why do the multiplication facts in the chart above create squares?

YOUR TURN!

Directions: Use the graph paper to create a model. Cut out and glue a model for each multiplication fact. Fill in the blanks to record the multiplication fact.

Show 6×6



GLUE HERE

_____ groups of _____

_____ \times _____ = _____

Show 7×7



GLUE HERE

_____ groups of _____

_____ \times _____ = _____

Show 8×8



GLUE HERE

_____ groups of _____

_____ \times _____ = _____



YOUR TURN! (continued)

Directions: Use the graph paper to create a model. Cut out and glue a model for each multiplication fact. Fill in the blanks to record the multiplication fact.

Show 9×9



GLUE HERE

_____ groups of _____

_____ \times _____ = _____

Show 10×10



GLUE HERE

_____ groups of _____

_____ \times _____ = _____

Show 11×11

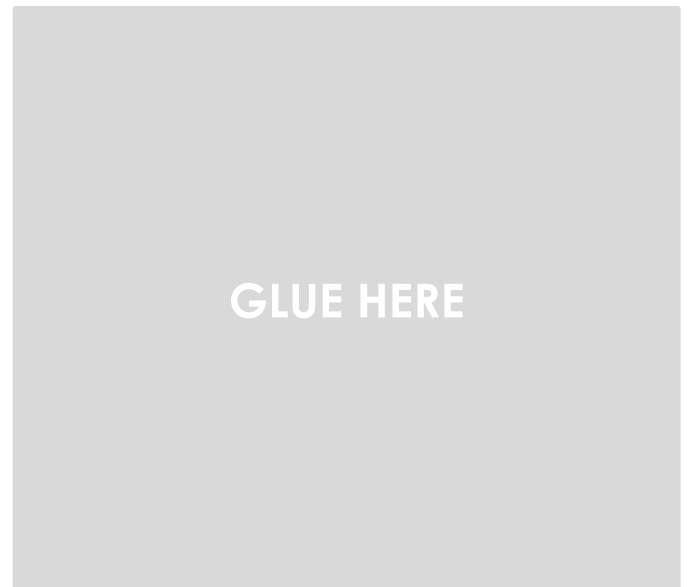


GLUE HERE

_____ groups of _____

_____ \times _____ = _____

Show 12×12



GLUE HERE

_____ groups of _____

_____ \times _____ = _____

MATH JOURNAL

LESSON 5

EXPLORE SQUARE FACTS

YOUR TURN! (continued)

Directions: Fill in the square facts chart below.

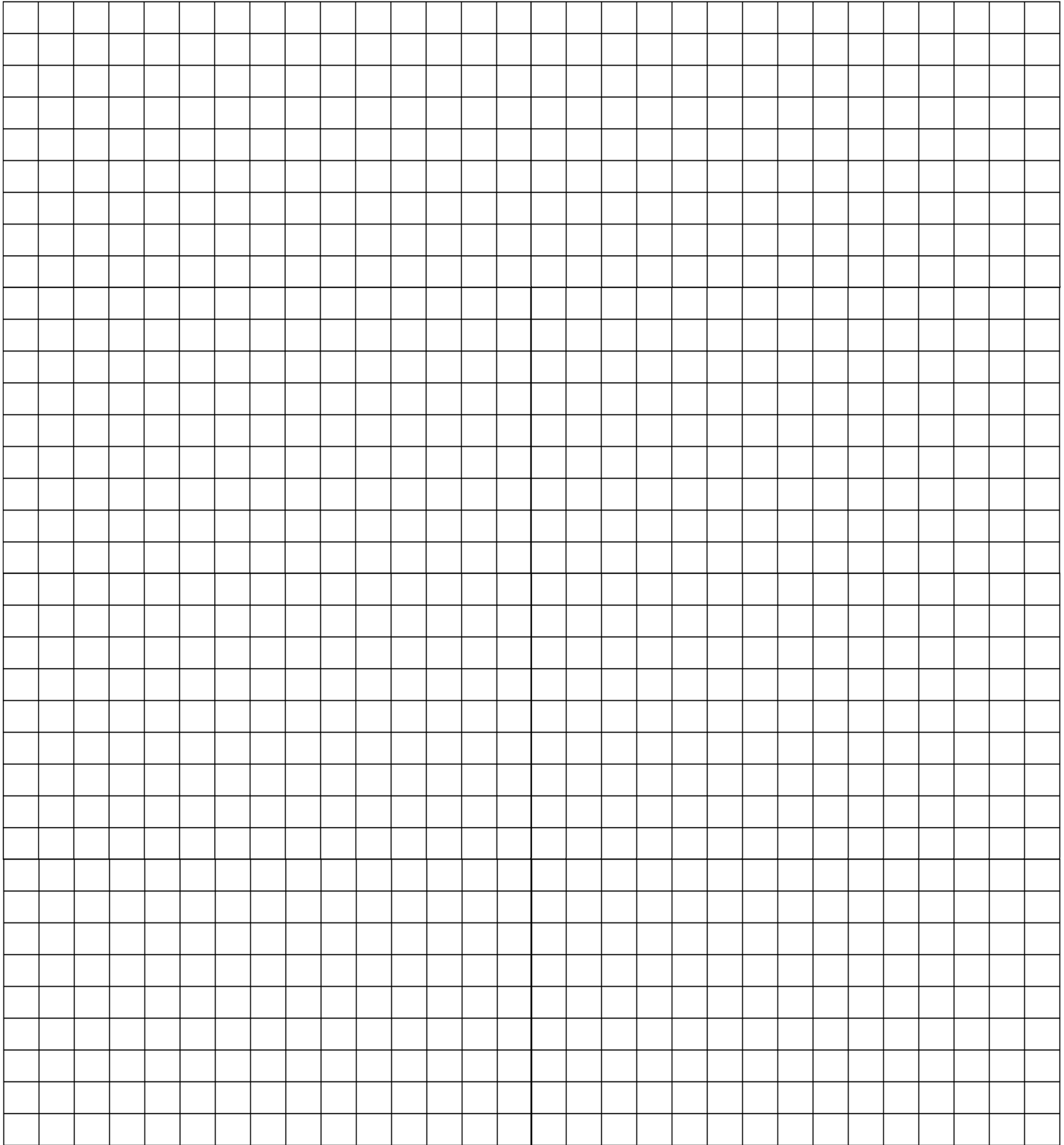
Square Facts	Multiplication Fact	Square Number
	1 x 1	=
	2 x 2	=
	3 x 3	=
	4 x 4	=
	5 x 5	=
	6 x 6	=
	7 x 7	=
	8 x 8	=
	9 x 9	=
	10 x 10	=
	11 x 11	=
12 x 12	=	



Materials Needed:



Directions: Use the graph paper to create models. Cut out the models and glue to match the problem.



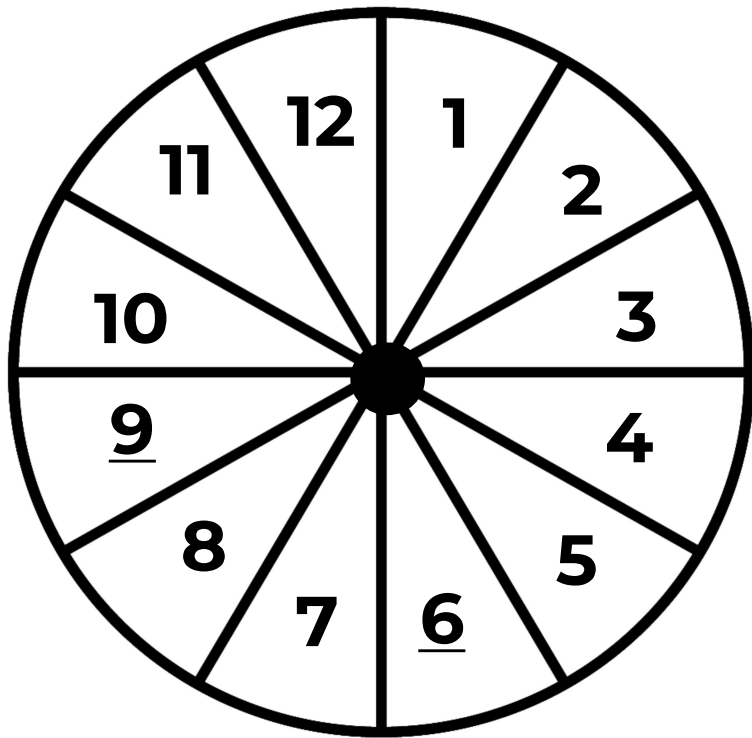
MULTIPLICATION

SQUARE FACTS ACTIVITY

Name: _____

Date: _____

Directions: Use a paper clip, pencil, and number wheel (below) to spin one number. Record a square fact using the number as factors and draw a model on the graph paper. Spin a new number to create new square facts.



EXAMPLE:

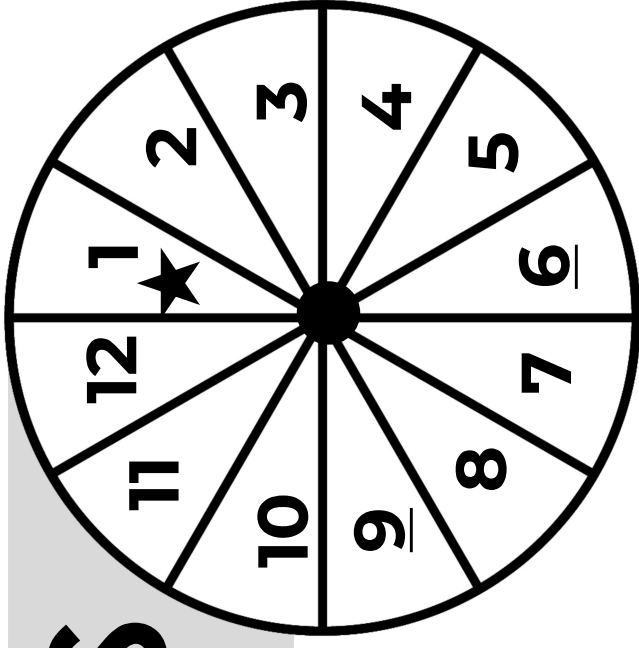
$$\boxed{2} \times \boxed{2} = \boxed{4}$$

PROBLEM	PRODUCT	PROBLEM	PRODUCT
1)	=	5)	=
2)	=	6)	=
3)	=	7)	=
4)	=	8)	=

PLAYER 1

SQUARE FACTS

EXTRA PRACTICE GAME



GAMEBOARD

4	16	49	144	9	1
81	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px;">MY NUMBER</div> <div style="font-size: 2em;">×</div> <div style="border: 1px solid black; padding: 5px;">MY NUMBER</div> <div style="font-size: 2em;">=</div> <div style="font-size: 3em;">?</div> </div>				144
25					121
100					36
36					100
64					25
49					81
1					9

DIRECTIONS:

Object of Game:

The first player to fill in an entire row or column wins.

1) Player #1:

- Spins a number (NOTE: Number 1 has a star because it is a free choice. It can either be a 1 or any number the player selects).
 - Multiply the number by 2 to find the product
 - Place an "X" on the product on the gameboard. (i.e. Spin a 3. The product of 3 and 2 is 6. Place "X" on the 6)
- 2) If no match is found, Player #1 loses a turn.
- 3) Player #2 repeats the steps above.

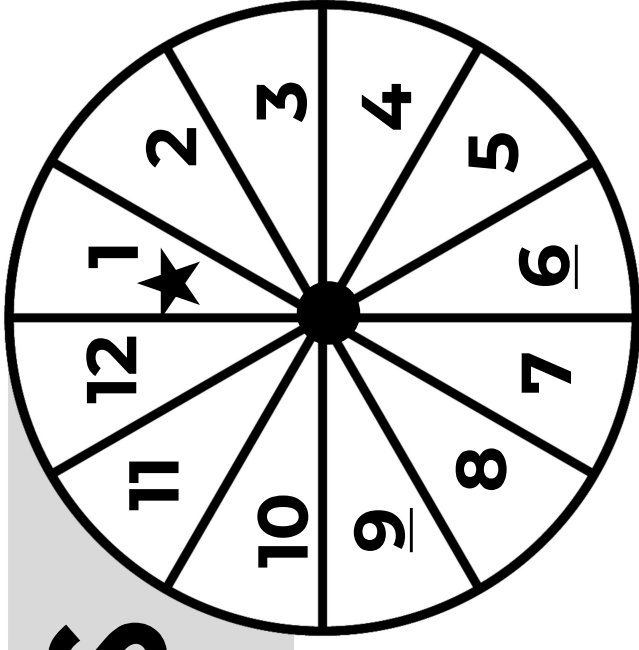
Materials:

- ✓ Player 1 and Player 2 Gameboards
- ✓ Pencils and Paper Clips

PLAYER 2

SQUARE FACTS

EXTRA PRACTICE GAME



GAMEBOARD

4	16	49	144	9	1
81	$\boxed{\text{MY NUMBER}} \times \boxed{\text{MY NUMBER}} = ?$				144
25					121
100					36
36					100
64					25
49					81
1					9

DIRECTIONS:

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Materials:

- ✓ Player 1 and Player 2 Gameboards
- ✓ Pencils and Paper Clips

Times Tables Game Answers

2 Times Tables	3 Times Tables	4 Times Tables	5 Times Tables	6 Times Tables	7 Times Tables
$1 \times 2 = 2$ $2 \times 2 = 4$ $3 \times 2 = 6$ $4 \times 2 = 8$ $5 \times 2 = 10$ $6 \times 2 = 12$ $7 \times 2 = 14$ $8 \times 2 = 16$ $9 \times 2 = 18$ $10 \times 2 = 20$ $11 \times 2 = 22$ $12 \times 2 = 24$	$1 \times 3 = 3$ $2 \times 3 = 6$ $3 \times 3 = 9$ $4 \times 3 = 12$ $5 \times 3 = 15$ $6 \times 3 = 18$ $7 \times 3 = 21$ $8 \times 3 = 24$ $9 \times 3 = 27$ $10 \times 3 = 30$ $11 \times 3 = 33$ $12 \times 3 = 36$	$1 \times 4 = 4$ $2 \times 4 = 8$ $3 \times 4 = 12$ $4 \times 4 = 16$ $5 \times 4 = 20$ $6 \times 4 = 24$ $7 \times 4 = 28$ $8 \times 4 = 32$ $9 \times 4 = 36$ $10 \times 4 = 40$ $11 \times 4 = 44$ $12 \times 4 = 48$	$1 \times 5 = 5$ $2 \times 5 = 10$ $3 \times 5 = 15$ $4 \times 5 = 20$ $5 \times 5 = 25$ $6 \times 5 = 30$ $7 \times 5 = 35$ $8 \times 5 = 40$ $9 \times 5 = 45$ $10 \times 5 = 50$ $11 \times 5 = 55$ $12 \times 5 = 60$	$1 \times 6 = 6$ $2 \times 6 = 12$ $3 \times 6 = 18$ $4 \times 6 = 24$ $5 \times 6 = 30$ $6 \times 6 = 36$ $7 \times 6 = 42$ $8 \times 6 = 48$ $9 \times 6 = 54$ $10 \times 6 = 60$ $11 \times 6 = 66$ $12 \times 6 = 72$	$1 \times 7 = 7$ $2 \times 7 = 14$ $3 \times 7 = 21$ $4 \times 7 = 28$ $5 \times 7 = 35$ $6 \times 7 = 42$ $7 \times 7 = 49$ $8 \times 7 = 56$ $9 \times 7 = 63$ $10 \times 7 = 70$ $11 \times 7 = 77$ $12 \times 7 = 84$
8 Times Tables	9 Times Tables	10 Times Tables	11 Times Tables	12 Times Tables	Square Facts
$1 \times 8 = 8$ $2 \times 8 = 16$ $3 \times 8 = 24$ $4 \times 8 = 32$ $5 \times 8 = 40$ $6 \times 8 = 48$ $7 \times 8 = 56$ $8 \times 8 = 64$ $9 \times 8 = 72$ $10 \times 8 = 80$ $11 \times 8 = 88$ $12 \times 8 = 96$	$1 \times 9 = 9$ $2 \times 9 = 18$ $3 \times 9 = 27$ $4 \times 9 = 36$ $5 \times 9 = 45$ $6 \times 9 = 54$ $7 \times 9 = 63$ $8 \times 9 = 72$ $9 \times 9 = 81$ $10 \times 9 = 90$ $11 \times 9 = 99$ $12 \times 9 = 108$	$1 \times 10 = 10$ $2 \times 10 = 20$ $3 \times 10 = 30$ $4 \times 10 = 40$ $5 \times 10 = 50$ $6 \times 10 = 60$ $7 \times 10 = 70$ $8 \times 10 = 80$ $9 \times 10 = 90$ $10 \times 10 = 100$ $11 \times 10 = 110$ $12 \times 10 = 120$	$1 \times 11 = 11$ $2 \times 11 = 22$ $3 \times 11 = 33$ $4 \times 11 = 44$ $5 \times 11 = 55$ $6 \times 11 = 66$ $7 \times 11 = 77$ $8 \times 11 = 88$ $9 \times 11 = 99$ $10 \times 11 = 110$ $11 \times 11 = 121$ $12 \times 11 = 132$	$1 \times 12 = 12$ $2 \times 12 = 24$ $3 \times 12 = 36$ $4 \times 12 = 48$ $5 \times 12 = 60$ $6 \times 12 = 72$ $7 \times 12 = 84$ $8 \times 12 = 96$ $9 \times 12 = 108$ $10 \times 12 = 120$ $11 \times 12 = 132$ $12 \times 12 = 144$	$1 \times 1 = 1$ $2 \times 2 = 2$ $3 \times 3 = 9$ $4 \times 4 = 16$ $5 \times 5 = 25$ $6 \times 6 = 36$ $7 \times 7 = 49$ $8 \times 8 = 64$ $9 \times 9 = 81$ $10 \times 10 = 100$ $11 \times 11 = 121$ $12 \times 12 = 144$