

## Pre 1.5b

## Tic-Tac-Toe Product Game

Play this game with a partner.

- Player A selects one factor from 1-9 (at the bottom of the game board). He/she places a marker on that factor.
- Player B selects a second factor and places a marker on that factor. (Player B is allowed to pick the same factor as Player A) He/she then **circles** the product of the two factors on the game board.
- Then Player B selects the first factor and Player A picks the second and **places an X** on the product.
- The player who gets four products in a row first wins the game. Four in a row could be up and down, right to left, or diagonal.
- Play on one game board at a time. The second is for a second game.

1	2	3	4	5	6
7	8	9	10	12	14
15	16	18	20	21	24
25	27	28	30	32	35
36	40	42	45	48	49
54	56	63	64	72	81

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25	27	28	30	32	35
36	40	42	45	48	49
54	56	63	64	72	81

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
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### Analyzing the Product Game

- 1) What have you learned about this game?
- 2) Does either play have an advantage? Why?
- 3) Why are some numbers missing from the board?
- 4) What numbers could be added to the board if 11 was a factor?

5) What size board would you need if you used only the numbers 1-3 as factors? Draw the board.

6) Create the game board for using the numbers 1-4 as factors. Draw below.

7) Create a 4 x 4 product game. How many factors can you have? What are the products? Draw and complete the board below to show your answers.


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8) **Extra Challenge:**  
Figure out what factors and products must be used to complete this 10 x 10 product game.


