



Quantile[®] Resource Overview

Resource Title: Pick a Perfect Product

Quantile Skill and Concept:

- Use multiplication facts through 144. (QSC121)
- Identify and use the rules for divisibility (2, 3, 4, 5, 6, 9, and 10). (QSC123)
- Know and use division facts related to multiplication facts through 144. (QSC162)
- Understand that many whole numbers factor in different ways. (QSC163)
- Divide using single-digit divisors with and without remainders. (QSC166)
- Find factors, common factors, and the greatest common factor of numbers; explain. (QSC222)

Quantile Measures: 690Q

For access to other free resources, visit www.Quantiles.com.

The Quantile[®] Framework for Mathematics, developed by educational measurement and research organization MetaMetrics[®], comprises more than 500 Quantile Skills and Concepts taught from kindergarten through high school. The Quantile Framework depicts the developmental nature of mathematics and the connections between mathematics content. By matching a student's Quantile measure with the Quantile measure of a mathematical skill or concept, you can determine if the student is ready to learn that skill, needs reinforcement in supporting concepts first, or whether enrichment would be appropriate. For more information and to use free Quantile utilities, visit www.Quantiles.com.



1000 Park Forty Plaza Drive, Suite 120, Durham, North Carolina 27713

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Pick a Perfect Product

Getting Ready

What You'll Need

- *Pick a Perfect Product* Rules
- Product Game Board
- Factor Game Board
- Two different colored pencils or markers
- Two small game pieces (pennies work well)
- Multiplication Table (*optional*)

Overview

Pick a Perfect Product is similar to the game Connect Four[®]. The object of the game is to be the first player to connect four squares on the **Product Board**. It can be played with two players or two teams of players.

This game helps students learn and use multiplication and division facts.

Pick a Perfect Product is played with the **Factor Board** and the **Product Board**.

Math Refresher for Parents

All that is needed for this game is remembering the basic multiplication facts.

Multiplication can be described in terms of *products* and *factors*. The **product** of 2 and 3 is 6. The **factors** of 6 are 2 and 3.

(factor) X (factor) = (product)

If those facts are buried deep in your memory, you can refer to the Multiplication Table that is included on the last page of this document. You and your child could “review” it together before a game starts

Have No Fear

Here are a few basic concepts to jog your math memories.

Playing the Game

Pick a Perfect Product Rules

A Game of Chance

- Give each player a different colored pencil or marker
- Give the players two game pieces
- Remember you have the Multiplication Table for support

- ➡ Player 1 places one game piece in *Row 1* and the second game piece in *Row 2* of the **Factor Board**.
- ➡ Player 1 must then find the product of these two numbers.
- ➡ If Player 1 has the correct answer, he or she places an “X” on that number on the **Product Board**.
- ➡ Player 2 moves **ONE** of the markers from either row on the **Factor Board**.
- ➡ Player 2 must then find the product of these two new numbers.
- ➡ If Player 2 has the correct answer, he or she places an “O” on the corresponding number on the **Product Board**.
- ➡ The game continues until one player has four squares connected horizontally, vertically or diagonally—four squares is a winner!

****If a player does not calculate the correct product, that player makes no mark on the **Product Table**, and it is the next player's turn.*





Where's the Math?

The numbers in parentheses (QT-N-222) refer to specific skills presented in the Quantile Framework® for Mathematics.

Grades 3 – 4

1. Use multiplication facts through 144. (QT-N121)
2. Identify and use the rules for divisibility (2, 3, 4, 5, 6, 9, and 10). (QT-N-123)
3. Know and use division facts related to multiplication facts through 144. (QT-N-162)
4. Understand that many whole numbers factor in different ways. (QT-N-163)
5. Divide using single-digit divisors, with and without remainders. (QT-N-166)
6. Find factors, common factors, and the greatest common factor of numbers; explain. (QT-N-222)

For more information about the specific skills listed above or about the Quantile Framework® for Mathematics, visit www.Quantiles.com.





Pick a Perfect Product

Pick a Perfect Product Game Board #1

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





Pick a Perfect Product

Pick a Perfect Product Game Board #2

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





GAMES

Pick a Perfect Product

Factor Board	Row 1	1	2	3	4	5	6	7	8	9	10	11	12	
	Row 2													
		1	2	3	4	5	6	7	8	9	10	11	12	





GAMES

Pick a Perfect Product

Multiplication Table

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



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