FOUR IN A ROW

Four in a Row games provide skills practice. The object is to get four spaces across, down, or diagonally. Players earn spaces by completing computation problems. Four in a Row games appear in Packet Resources (Essential Skills and Nonroutine Problems).

Why: Attain skills so that problem solving is not derailed by lack of arithmetic fluency. Practice in a motivating game format.

Players: 2

Materials: Board game, 2 sets of colored counters (for the game board), 2 small objects (e.g. cubes, paperclips, cut up paper) that will cover numbers in Box A and Box B

Launch Activity: Use one or more of the provided "review" Four in a Row games to introduce the rules and procedures. Play first as a class, where teacher is "Player 1" and class is "Player 2". Multiplying Single Whole Digit Numbers is described here.

- To start the game, Player 1 (teacher) chooses one number from Box A and one number from Box B, and put a small object on each.
- Player 1 finds the product of the selected numbers from Box A and Box B and puts their colored counter on the product on the game board. Player 2 confirms that the result is correct. (Answer key is provided.) If Player 2 can demonstrate that the result is incorrect, and produce the correct result, then Player 2 gets the square.
- Player 2 moves ONE of the markers (EITHER from Box A OR from Box B), finds the product, and puts their colored counter on that product on the game board. Player 1 confirms that the answer is correct, or corrects it to claim that square.
- Play continues until one player gets four spaces in a row – across, down, or diagonally.

Differentiation Ideas:

- 3 players: Player 1, Player 2, and the Answer Checker. Rotate roles after each game.
- 4 players play in teams of 2 to allow pair collaboration during the game.
- Allow tools (i.e., calculators or multiplication charts) when applicable.
- When two Four in a Row games are in the same packet, copy them front to back, so players can play both or choose one to play.

Accountability/Follow-up Ideas:

- Ask students to make an "Answer Key Grid" of all possible products prior to playing a Four in a Row game. An Answer Key Grid template is provided here.
- Encourage students to create their own Four in a Row games. First make an answer key grid, then make a game board. A Four in a Row Game Board template is provided here.

FOUR IN A ROW: MULTIPLYING SINGLE DIGIT WHOLE NUMBERS

Players: 2+

Objective: Be the first player to claim 4 spaces in a row, column, or diagonal to win the game.

Materials: Game board, 2 sets of colored counters (for the game board), 2 objects (e.g. cubes, paperclips, cut up paper) that will cover numbers in Box A and Box B

Rules: Two players alternate finding the product by choosing a factor from Box A and a factor from Box B. Players check the product (answer key provided) and, if successful, place their colored counter on a space with the appropriate product.

BOX A: FACTOR		
2	3	4
5	6	7

BOX B: FACTOR		
4	5	6
7	8	9

GAME BOARD: FIND THE PRODUCT ($A \times B$)					
8	24	32	18	48	25
35	42	10	30	18	24
20	24	21	56	35	36
15	28	63	16	12	54
42	14	45	30	49	28
27	20	36	12	40	16

FOUR IN A ROW: MULTIPLYING SINGLE DIGIT WHOLE NUMBERS
ANSWER KEY

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

FOUR IN A ROW: WHOLE NUMBER SUBTRACTION

Players: 2+

Objective: Be the first player to claim 4 spaces in a row, column, or diagonal to win the game.

Materials: Game board, 2 sets of colored counters (for the game board), 2 objects (e.g. cubes, paperclips, cut up paper) that will cover numbers in Box A and Box B

Rules: Two players alternate finding the difference by choosing a minuend from Box B and a subtrahend from Box A. (ORDER MATTERS!) Players check the difference (answer key provided) and, if successful, place their colored counter on a space with the appropriate product.

BOX A: SUBTRAHEND		
5	10	15
20	25	30

BOX B: MINUEND		
35	45	60
70	85	100

GAME BOARD: FIND THE DIFFERENCE ($B - A$)					
30	40	80	25	45	55
70	20	55	90	15	50
40	75	10	80	35	5
45	40	30	35	70	65
30	65	25	60	40	20

60	15	85	75	55	95	

FOUR IN A ROW: WHOLE NUMBER SUBTRACTION
ANSWER KEY

		BOX B					
	B - A	35	45	60	70	85	100
BOX A	5	30	40	55	65	80	95
	10	25	35	50	60	75	90
	15	20	30	45	55	70	85
	20	15	25	40	50	65	80
	25	10	20	35	45	60	75
	30	5	15	30	40	55	70

FOUR IN A ROW: ADDING DECIMALS

Players: 2+

Objective: Be the first player to claim 4 spaces in a row, column, or diagonal to win the game.

Materials: Game board, 2 sets of colored counters (for the game board), 2 objects (e.g. cubes, paperclips, cut up paper) that will cover numbers in Box A and Box B

Rules: Two players alternate finding the sum by choosing an addend from Box A and an addend from Box B. Players check the sum (answer key provided) and, if successful, place their colored counter on a space with the appropriate sum.

BOX A: ADDEND		
0.35	4	9.55
3.175	26.13	0.6

BOX B: ADDEND		
0.025	1.04	0.25
1.4	0.104	2.5

GAME BOARD: FIND THE SUM ($A + B$)					
9.575	6.5	0.454	27.53	4.025	1.39
0.85	3.279	2	9.654	3.1	0.375
5.4	5.04	5.675	3.2	26.155	9.8
28.63	12.05	0.6	3.425	1.75	4.215
4.575	2.85	10.95	4.25	0.625	27.17
0.704	26.237	0.64	26.38	10.59	4.104

FOUR IN A ROW: ADDING DECIMALS
ANSWER KEY

		BOX B					
	A + B	0.025	1.04	0.25	1.4	0.104	2.5
BOX A	0.35	0.375	1.39	0.6	1.75	0.454	2.85
	4	4.025	5.04	4.25	5.5	4.104	6.5
	9.55	9.575	10.59	9.8	10.95	9.654	12.05
	3.175	3.2	4.215	3.425	4.575	3.279	5.675
	26.13	26.155	27.17	26.38	27.53	26.237	28.63
	0.6	0.625	0.64	0.85	2	0.704	3.1

FOUR IN A ROW: _____

Players: 2

Materials: Board game, 2 sets of colored counters (for the game board), 2 objects (e.g. cubes, paperclips, cut up paper) that will cover numbers in Box A and Box B

Object of the Game:

Box A		

Box B		

Game Board