

# Grid Games

## For Algebra I

LITERAL EQUATIONS					
A	B	C	D	E	F
1 $3x-2y=9$	$x-3y=4y$	$2x-5y=8$	$3x+2y=7$	$y-4x=8$	$x-z=-x-z$
2 $4xy=3z$	$2x+7=5y$	$x-y-z=12$	$x+4x-16x$	$\frac{1}{2}xy=8$	$x^2-y=8$
3 $x-4y=8$	$x+y=3$	$x-y=4$	$x-y=2$	$x+y=-1$	$x+2y=6$
4 $\frac{x}{3}+2=4y$	$\frac{2}{3}xy=2z$	$\frac{3x}{2}=6z$	$\frac{x+2}{7}=6z$	$\frac{x-5}{3y}=2z$	.....
5 $x-y=5n$	$2x+y=-6$	$x-4y=-4x$	$3x-7y=21$	$3x+5y=-15$	$2x-6y=6$
6 $A=\frac{4xy}{3z}$	$G=4x^2y$	$3xy-5z=6$	$M=3xy^3$	$-6y+2xz=5$	$\frac{3x}{2y}$



# Grid Games for Algebra I

Grid Games is an assortment of fun activities covering 9 different concepts – including equations, linear expressions, polynomials, quadratics and square roots. Students work problems, while trying to get 3-in-a-row to win the game.

Each activity is run off on card stock. The only other items necessary to play the games are bingo chips, a number die and a letter die.

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## RULES TO PLAY "GRID GAMES"

1. Divide the class into groups of no more than 3 students - two students will play the game and one student is the answer person. Then have the students place their desks so the two players are facing each other and the answer person is sitting to the side.
2. Each group is then given the following:

Game sheet	Bingo chips in two colors
answer key	2 dice - one number die and the other with the letters A, B, C, D, E and F
3. Place the game sheet between the two players. The answer person receives the answer key.
4. Each player then rolls the number die. High roll is Player 1, who begins the game.
5. Player 1 rolls both dice and finds the corresponding location on the grid. For example, Player 1 rolls C5. He moves right to C and down 5.
6. Player 1 then proceeds to answer the question in the corresponding grid. If he answers the question correctly, he places a bingo chip on the square. If he does not answer the question correctly, Player 2 may answer the question and cover the square.
7. Player 2 then rolls the dice and answers the question. As above, if Player 2 answers the question correctly, he covers it with a bingo chip. If he misses it, Player 1 may answer the question.
8. Player 1 then rolls the dice. Play continues until one player has 3 chips in a row, either horizontally, vertically, or diagonally.
9. If a player rolls the dice and the square has already been covered, the player will roll again.
10. The winner then trades places with the answer person and the game begins again.
11. If only two people must be in a group, then Player 2 checks the answer when Player 1 attempts to answer the question correctly. But Player 2 may not answer the question if Player 1 answers it incorrectly. Play continues if Player 1 answers it incorrectly. Play continues with Player 2 until someone wins.



## SUGGESTIONS

1. Run off all game sheets and answer sheets on color cardstock. This is much sturdier than regular color paper.
2. Run similar concepts off using different colors of card stock.
3. Use two or three different concepts during the activity day. Alternate game sheets with different groups during the class period.
4. Use the game sheets as review worksheets. Students answer the questions directly on the game sheet.
5. To make the game last longer, students must get 4 in a row to win.

## ALTERNATIVE IDEAS

Give each student a die. They roll and first one to answer the question on that square gets to cover the square.

Use as a game of strategy with no dice. The students choose their square based on their opponent's play.

Use sheet protectors and markers instead of chips. The students initial their squares when they answer the question correctly.

If two play, write answers on index cards (example - C3). The players play as with three people, but once the answer has been given, they turn over the corresponding card and check their answer.



# Absolute Value

Simplify each expression below:

	A	B	C	D	E	F
1	$ 3x-2 +5,$ when $x = 6$	$3 9-38 $	$-2 51-74 $	$ 16-21 -41$	$12- x+10 $ when $x = -2$	$ 8-3x $ when $x = -5$
2	$-2 11-28 $	$5+ x-14 $ when $x = -8$	$8- 14-3x $ when $x = -5$	$11+ x+6 $ when $x = -5$	$- 5-19 +4$	$- 51-39 $
3	$ 5-2x -5,$ when $x=3$	$-2 2-27 $	$5+ 4-6x $ when $x=5$	$\frac{1}{2} 49-31 $	$-\frac{1}{2} 12+(-34) $	$ 13-x +4$ when $x = -4$
4	$-2 -14-21 $	$7- 4x+9 $ when $x = -1$	$ 32-(-23) $	$12- x-4 $ when $x = 8$	$ 9-3x -6,$ when $x = 4$	$ -14-37 $
5	$12- x-11 $ when $x = 8$	$-\frac{1}{3} -12+42 $	$\frac{3}{5} 8-63 $	$ 2x+3 +1$ when $x = 6$	$3- x-4 $ when $x = 9$	$-3 -7+(-18) $
6	$- 10-21 -8$	$ 5+2x +11$ when $x = -4$	$12- x-11 $ when $x = 8$	$-\frac{1}{2} 8-43 $	$ -8-12 -17$	$ 12-x -4$ when $x = -7$

# SLOPE 1

Find the slope for each graph below:

	A	B	C	D	E	F
1						
2						
3						
4						
5						
6						



# Finding Lines 2

Identify the equation of each line below:

	A	B	C	D	E	F
1						
2						
3						
4						
5						
6						

# Absolute Value answer sheet

	A	B	C	D	E	F
1	21	87	-46	-36	4	23
2	-34	27	-21	12	-10	-12
3	-4	-50	31	9	-11	21
4	-70	2	55	8	-3	51
5	9	-10	33	16	-2	-75
6	-19	14	9	$-\frac{35}{2} = -17\frac{1}{2}$	3	15

# Absolute Value answer sheet

	A	B	C	D	E	F
1	21	87	-46	-36	4	23
2	-34	27	-21	12	-10	-12
3	-4	-50	31	9	-11	21
4	-70	2	55	8	-3	51
5	9	-10	33	16	-2	-75
6	-19	14	9	$-\frac{35}{2} = -17\frac{1}{2}$	3	15

# SLOPE 1 ANSWERS

	A	B	C	D	E	F
1	$+2/5$	$-3/2$	undefined	$-2/3$	-1	+1
2	$+1/3$	0	$-1/3$	$-3/2$	$+1/2$	$-3/4$
3	+3	-1	$+2/3$	$+1/4$	$-1/2$	+2
4	$+3/5$	undefined	-2	$-1/2$	$-2/3$	$-3/5$
5	+1	$+3/2$	$+3/4$	$+1/2$	-2	0
6	-1	$+2/3$	$-1/4$	+1	-2	-3

# SLOPE 1 ANSWERS

	A	B	C	D	E	F
1	$+2/5$	$-3/2$	undefined	$-2/3$	-1	+1
2	$+1/3$	0	$-1/3$	$-3/2$	$+1/2$	$-3/4$
3	+3	-1	$+2/3$	$+1/4$	$-1/2$	+2
4	$+3/5$	undefined	-2	$-1/2$	$-2/3$	$-3/5$
5	+1	$+3/2$	$+3/4$	$+1/2$	-2	0
6	-1	$+2/3$	$-1/4$	+1	-2	-3

## Finding Lines 2 answer sheet

	A	B	C	D	E	F
1	$y = x - 3$	$y = -2x - 1$	$y = 1/3x$	$y = -1/3x + 1$	$y = 2x$	$y = -3x + 1$
2	$y = -2$	$y = 3x$	$y = 3/2x + 3$	$y = 1/3x + 4$	$y = x + 1$	$y = x + 2$
3	$y = -2x - 3$	$y = -2x + 2$	$y = 3x + 1$	$y = -x - 3$	$x = 3$	$y = 1/2x - 1$
4	$y = 2x - 4$	$y = -1/2x + 1$	$y = 2/3x$	$y = -x + 1$	$y = -3x - 4$	$y = 3x - 3$
5	$y = -2/3x - 1$	$y = 1/3x - 1$	$y = 2x - 1$	$y = 3/2x - 4$	$y = -1/3x - 2$	$y = 5$
6	$y = -1/2x + 4$	$y = -x + 2$	$x = -4$	$y = -3/2x - 4$	$y = 1/2x - 4$	$y = -1/3x - 1$

## Finding Lines 2 answer sheet

	A	B	C	D	E	F
1	$y = x - 3$	$y = -2x - 1$	$y = 1/3x$	$y = -1/3x + 1$	$y = 2x$	$y = -3x + 1$
2	$y = -2$	$y = 3x$	$y = 3/2x + 3$	$y = 1/3x + 4$	$y = x + 1$	$y = x + 2$
3	$y = -2x - 3$	$y = -2x + 2$	$y = 3x + 1$	$y = -x - 3$	$x = 3$	$y = 1/2x - 1$
4	$y = 2x - 4$	$y = -1/2x + 1$	$y = 2/3x$	$y = -x + 1$	$y = -3x - 4$	$y = 3x - 3$
5	$y = -2/3x - 1$	$y = 1/3x - 1$	$y = 2x - 1$	$y = 3/2x - 4$	$y = -1/3x - 2$	$y = 5$
6	$y = -1/2x + 4$	$y = -x + 2$	$x = -4$	$y = -3/2x - 4$	$y = 1/2x - 4$	$y = -1/3x - 1$





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**SCHOOLS, CALL FOR BULK RATES.**

Quantity	Product Description	Price Each	Price
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	Elementary GG Activity Book	\$20.00	
	Multiplication GG Activity Book	\$20.00	
	Middle School GG Activity Book	\$20.00	
	Algebra I GG Activity Book	\$20.00	
	Algebra 2 GG Activity Book	\$20.00	
	Geometry GG Activity Book	\$20.00	
	<b>MatchingMania</b>		
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	Multiplication MatchingMania	\$20.00	
	Middle School MatchingMania Book	\$20.00	
	Algebra I MatchingMania Book	\$20.00	
	Advanced Math MatchingMania Book	\$20.00	
	Geometry MatchingMania Book	\$20.00	
	Remediation MatchingMania Book	\$20.00	
	<b>Teacher Toolkit</b>		
	• includes any book, dice and chips	\$27.00	
	<b>Bingo Chips (2 colors of 250 chips)</b>	\$6.00	
	<b>Dot Dice (set of 10 dice)</b>	\$2.50	
	<b>Blank Dice (set of 10 dice)</b>	\$2.50	
	<b>Total cost of Merchandise</b>		
	<b>SHIPPING CHARGES: 10% of total cost</b>	<b>Shipping Charges</b>	
		<b>TOTAL</b>	