It's Algebraic!

You and your teammates will be dealt six cards at a time and must play all six cards to make an algebraic expression. Whoever makes the expression with the highest answer is the winner.

Set-Up:

- **There should be two groups of cards, a group with numbers 1-12 and a group with addition, subtraction, multiplication, division, a squared sign, and a Pi sign, equaling 3.14.**
- **Print out the cards. Preferably, the number cards and the other cards should be printed on two different colored sheets. Laminate and cut out each set of cards.**

Rules:

- **In each round, each player is dealt three cards from each pile. For example, you may receive the cards 6, 5, 9, x, +, and π.**
- **You must try to make the largest equation possible out of the cards you have been dealt. For example, you may come up with: 9 x 6 + 5π to get the total of 69.7.**
- **Figure out the totals of each player. Let's say there are five players. At the end of each round, the person with the highest total is awarded 5 points, the second highest total is awarded 4 points, the third highest total is awarded 3 points, the fourth highest total is awarded 2 points, and the lowest total is awarded 1 point.**
- **Play ten rounds. At the end of the game, a perfect total is 50 points. The lowest a person can have is 10 points. Whoever has the highest total is the winner!**

Included in this set are the two sets of cards for a total of 72 cards (48 number cards and 24 computation cards) as well as a scoring sheet for your team. NOTE: You can laminate the scoring sheet and provide a thin-tipped dry-erase marker for recording.

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

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

7	8	9
10	11	12
Second Set		
×	÷	+
−	π	(squared)
×	÷	+

$-$	π	**(squared)**
$\times$	$\div$	$+$
$-$	π	**(squared)**
$\times$	$\div$	$+$
$-$	π	**(squared)**

Scoring Sheet

The scoring sheet provides room for as many as 6 players, though you can have as few as 2.

PLAYER	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6	Round 7	Round 8	Round 9	Round 10
1										
2										
3										
4										
5										
6										

End of the Game:

Total Amount of Points for:

Player 1: _____ Player 2: _____ Player 3: _____

Player 4: _____ Player 5: _____ Player 6: _____

Pig: Addition

This game for two or more players gives students practice with mental addition and experience with thinking strategically.

The object: To be the first to score 100 points or more.

How to play: Players take turns rolling two dice and following these rules:

1. On a turn, you roll the dice as many times as you want, mentally keeping a running total of the sums that come up. Let's say you get a 4 and 3, then a 6 and a 5. You add those numbers together and get 18. When you stop rolling, you record the total and add it to the scores from previous rounds.

2. But, if a 1 comes up on one of the dice **before** you decide to stop rolling, you score 0 for that round and it's the next player's turn.

3. Even worse, if a 1 comes up on both dice, not only does the turn end, but your **entire accumulated total** returns to 0.

Pig: Multiplication

This game for two or more players gives students practice with mental multiplication and experience with thinking strategically.

The object: To be the first to score 200 points or more.

How to play: Players take turns rolling two dice and following these rules:

1. On a turn, you roll the dice as many times as you want, mentally keeping a running total of the sums that come up. Let's say the first time, you roll 5 x 6= 30, then 4 x 3= 12. You add 30+12 together, and so on. When you stop rolling, you record the total and add it to the scores from previous rounds.

2. But, if a 1 comes up on one of the dice **before** you decide to stop rolling, you score 0 for that round and it's the next player's turn.

3. Even worse, if a 1 comes up on both dice, not only does the turn end, but your **entire accumulated total** returns to 0.

Array Mania

Math skills: This two-person game involves probability and strategy, and gives you experience with multiplication in a geometric context.

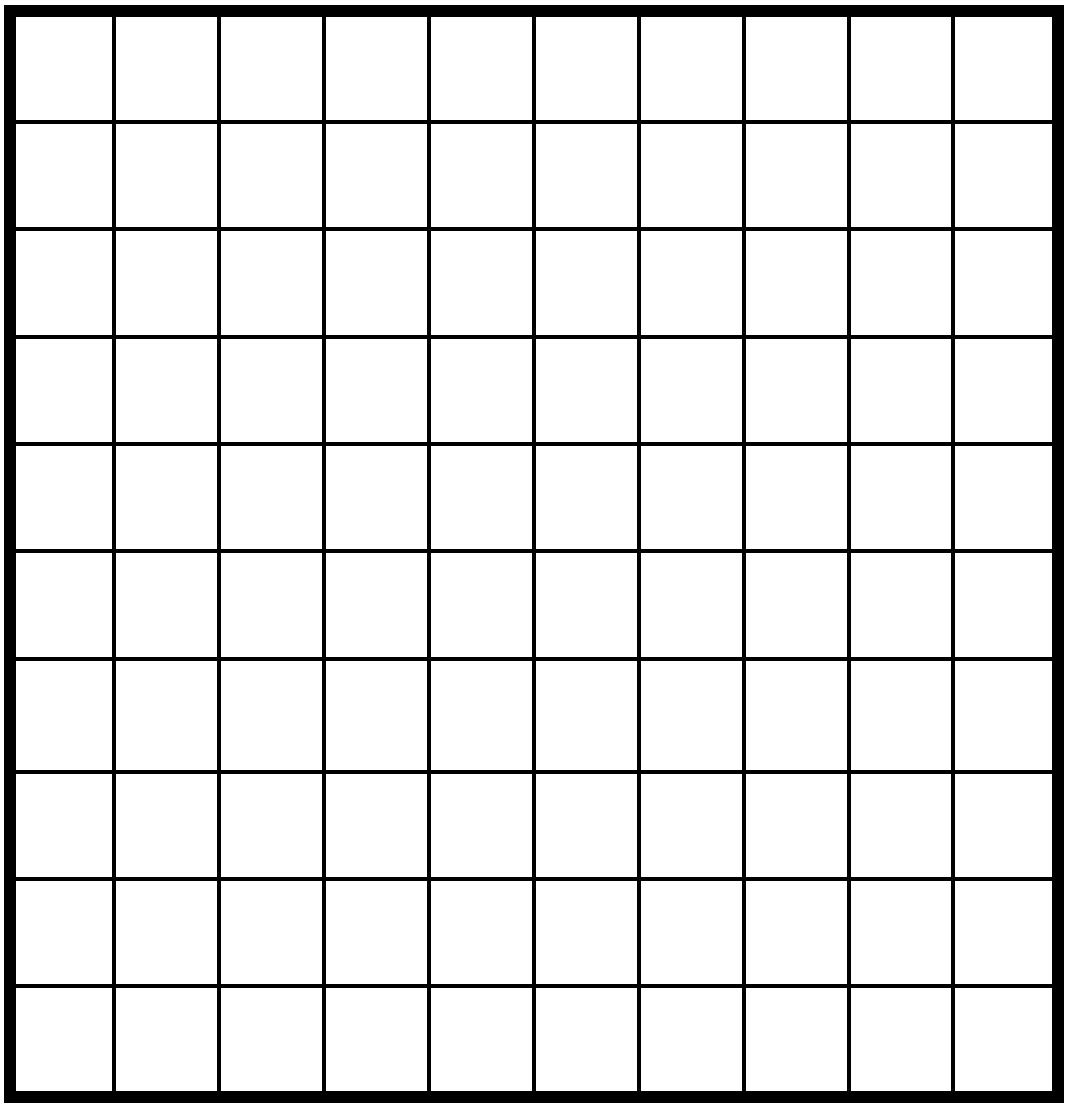
Set-Up: You need to cut out and laminate the cards offered as well as laminate the game board. Provide players with their own laminated board as well as their own fine-tipped dry-erase marker.

You are going to make rectangular arrays on a board that has 100 squares in a 10 x 10 array. You will draw one card at a time to find out how large your array is going to be. Color in your array on the board until you have absolutely no more space. You play until you get a card that has an array that **does not fit**. Whoever has the least amount of uncolored spaces at the end of the game is the winner.

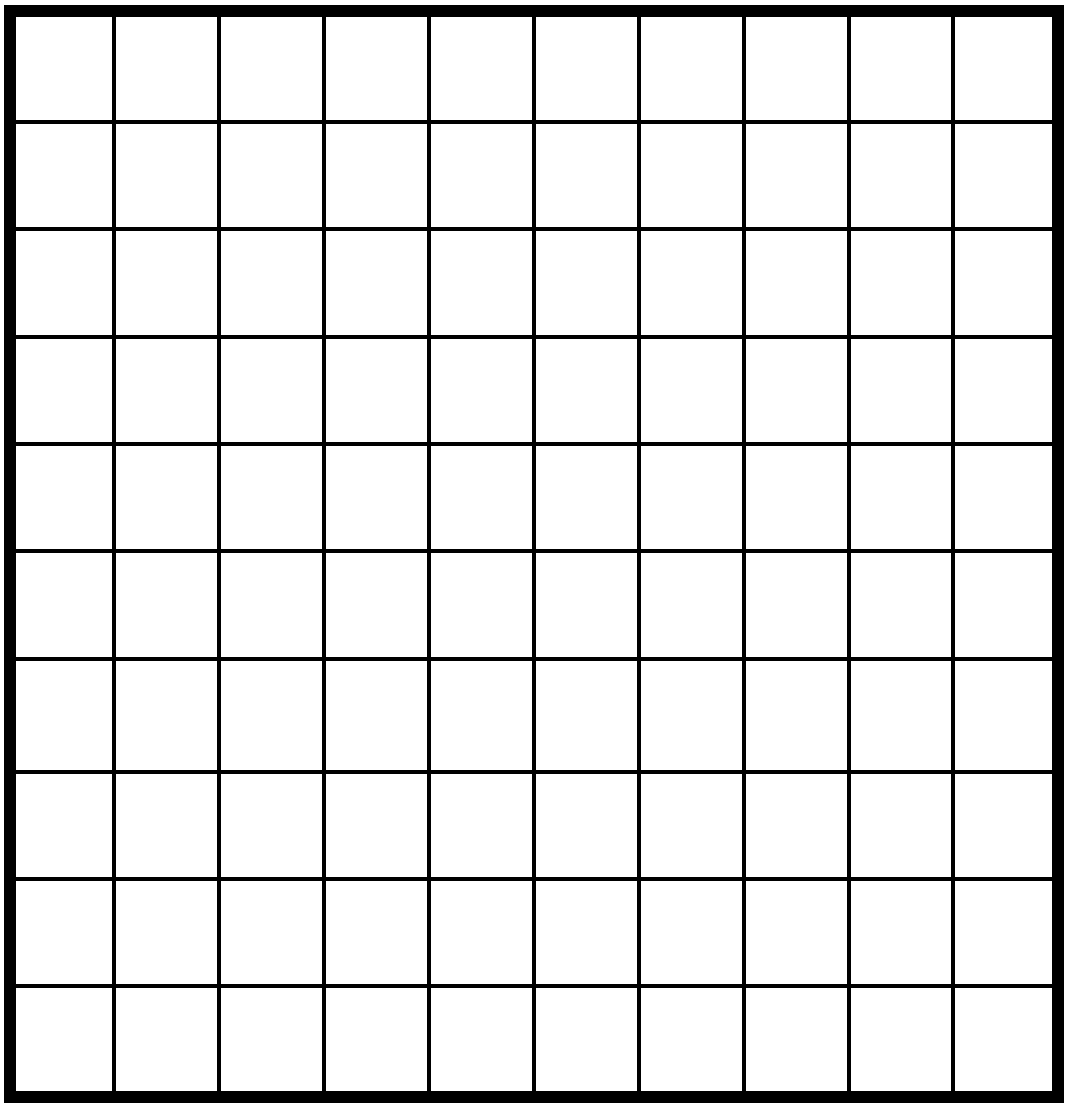
2 x 2	3 x 3	4 x 4
5 x 5	2 x 4	3 x 2
4 x 5	2 x 1	3 x 5
3 x 4	5 x 1	6 x 1
2 x 2	3 x 3	4 x 4
5 x 5	2 x 4	3 x 2

4 x 5	2 x 1	3 x 5
3 x 4	5 x 1	6 x 1
2 x 2	3 x 3	4 x 4
5 x 5	2 x 4	3 x 2
4 x 5	2 x 1	3 x 5
3 x 4	5 x 1	6 x 1
1 x 1	1 x 1	1 x 1
1 x 1	1 x 1	1 x 1

Player 1's Game Board for Array Mania



Player 2's Game Board for Array Mania



Practice Spelling Words with Spelling Math:

A= 1	B= 2	C= 3	D= 4	E= 5	F= 6	G= 7	H= 8	I= 9
J= 10	K= 11	L= 12	M= 13	N= 14	O= 15	P= 16	Q= 17	R= 18
S= 19	T= 20	U= 21	V= 22	W= 23	X= 24	Y= 25	Z= 26	

Example: Acrobat= 1+ 3+ 18+ 15+ 2+ 1+ 20= 60

Add together the values of ten of your spelling words:

Word	Equation	Answer

HOME ON THE RANGE!

ESTIMATE WHAT THE ANSWERS ARE FOR EACH PROBLEM ON THE CARDS.

0-9	10-19
20-29	30-39

DIVISION CARDS TO CUT OUT:

808 ÷ 43	900 ÷ 24	84 ÷ 26	86 ÷ 43	982 ÷ 42
629 ÷ 17	89 ÷ 11	864 ÷ 62	945 ÷ 41	502 ÷ 37
514 ÷ 15	463 ÷ 22	203 ÷ 29	620 ÷ 24	93 ÷ 31

Tenths, Hundredths, Thousandths

Set-Up: Make each manipulative below into a spinner. Print the recording sheets (they can be laminated and students can write on them with thin-tip dry-erase markers).

There are two versions of the **Tenths, Hundredths, and Thousandths** game students can play.

GAME A:

Rules: Spin the tenths, hundredths, and thousandths spinners to make numbers. Record the number that is made in each round, as you will have ten rounds. At the end of the game, add the numbers together and see who has the highest total. An entire group can play, or partners can play. This game comes with three spinners and a recording sheet.

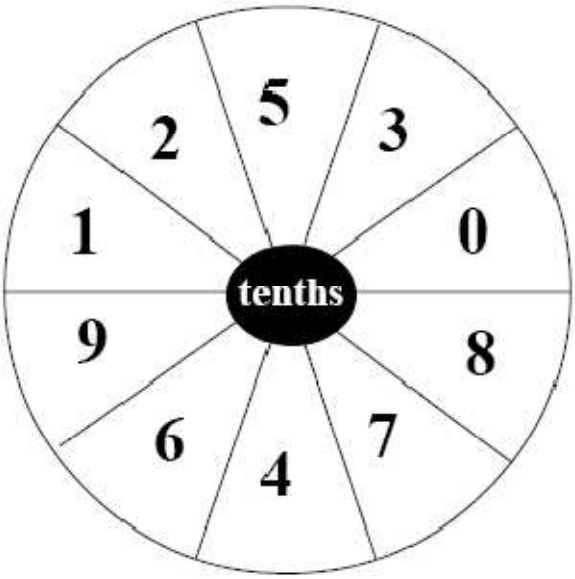
Example: You roll a 6 for the tenths, a 4 for the hundredths, and a 7 for the thousandths. The number that will be made in that round is **.647**. **Note the decimal in front of the number.** The numbers you will be making will be smaller than 1. **.647 can also be written as 0.647.**

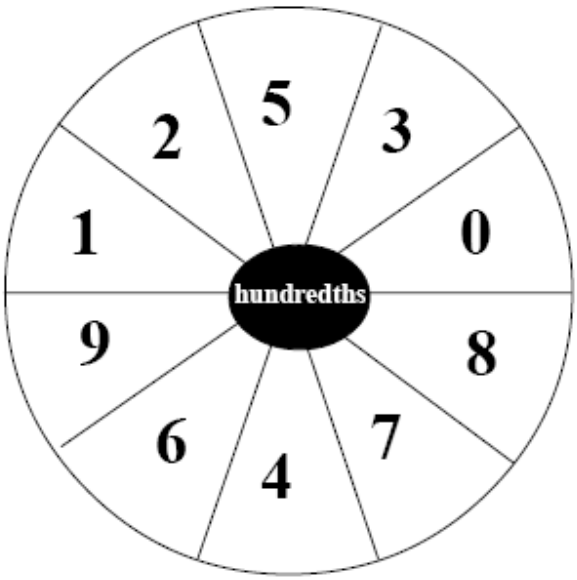
GAME B:

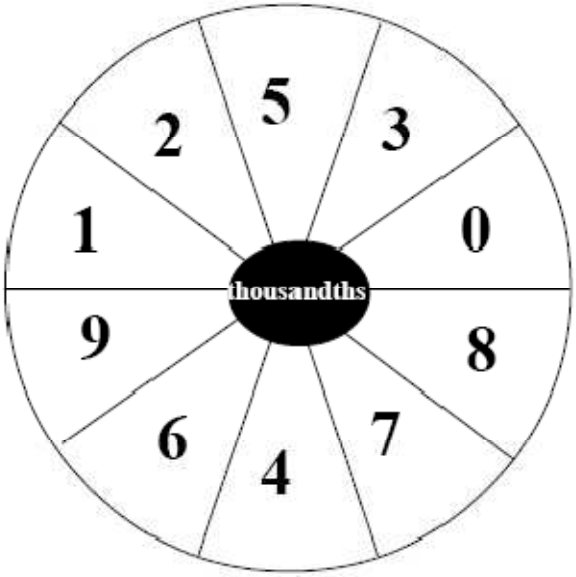
Rules: Spin the tenths, hundredths, and thousandths spinners to make numbers. Record the number that is made in each round, as you will play only two rounds at a time. Let's say you make the number .629 in the first round. Will you make a number in the second round that brings the total to 1 or higher when added to the number from the first round? You will repeat this ten times. Whichever player has the most totals of 1 or more is the winner.

Example: You roll .629 in the first round. In the second round, you roll .316. When you add .629 and .316 together, you get .945. That means you did NOT get more than 1 that time. Yet in the next round, you may roll .730 and .652, and obviously your answer will be 1 or more.

Manipulatives to Make Spinners:







Game A Recording Sheet:

Round		Tenths Place	Hundredths Place	Thousandths Place
1	0.			
2	0.			
3	0.			
4	0.			
5	0.			
6	0.			
7	0.			
8	0.			
9	0.			
10	0.			
TOTAL:				

Game B Recording Sheet:

ROUND	Number #1	Number #2	Is the total larger than 1?
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Matching or Concentration Games:

Both groups can be combined or played separately.

0.77	0.3	0.1
0.4	0.30	0.043
0.5	0.005	0.061
0.01		

SIXTY-SEVEN HUNDREDTHS	TWENTY-ONE HUNDREDTHS	FIFTY-TWO HUNDREDTHS
SIXTY-ONE HUNDREDTHS	FIVE THOUSANDTHS	FORTY-THREE HUNDREDTHS
FIVE HUNDREDTHS	THIRTY-FIVE HUNDREDTHS	SEVENTY-EIGHT HUNDREDTHS
FORTY-EIGHT HUNDREDTHS		

0.67	0.43	0.52
0.48	0.78	0.21
0.05	0.005	0.61
0.35		

THREE TENTHS	THIRTY HUNDREDTHS	SIXTY-ONE THOUSANDTHS
FIVE THOUSANDTHS	FORTY-THREE THOUSANDTHS	ONE HUNDREDTH
SEVENTY-SEVEN HUNDREDTHS	FIVE TENTHS	ONE TENTH
FOUR TENTHS		