

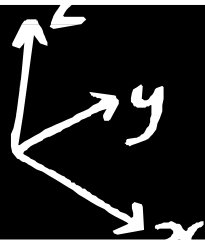
# MATH FIELD DAY

MAY 22, 2010

## COACH'S INFORMATION PACKET

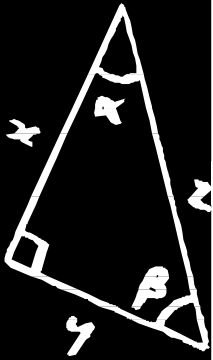
ELEMENTARY SCHOOL  
4<sup>th</sup> & 5<sup>th</sup> Grades

quadratic  $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$



$$f(a) = \left( a - \frac{7}{b^2} + \sqrt{a(b)} \right)^3$$

Theorem



$\sin \alpha$

$\sin a$

$24 \times 4$

$3z$

$\sqrt{49} = 7$

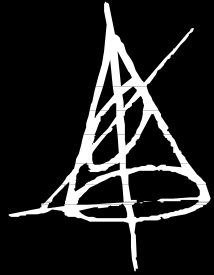
equation

$\frac{dx}{dy}$

calculus

x	y
6	7
7	2
9	10
3	3
9	7
12	11

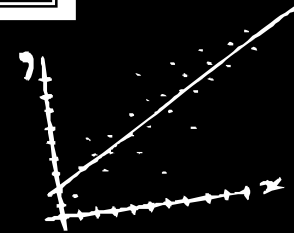
$x = -6$



$\frac{\sin \beta}{\sin \alpha}$

Pythagoras

$2y - 3y = x$



# Math Field Day 4<sup>th</sup> & 5<sup>th</sup> Grades Events Schedule

**Saturday, May 22, 2010**

The tentative schedule is as follows:

- 7:45 a.m. – 7:55 a.m.**      **Welcome/ Orientation – A. B. Miller Gymnasium**
- 7:55 a.m. – 8:10 a.m.**      **Passing Period – Students Will Move to the Designated Test Rooms**
- 8:15 a.m. – 9:15 a.m.**      **Session One (60 minutes)**
- Grades Four & Five Tests**
- Round Robin  
   Terminology  
   Calculator Challenge  
   Problem Solving  
   Mental Gymnastics  
   (4<sup>th</sup> or 5<sup>th</sup> Grade General Knowledge Multiple Choice Test for Alternates)
- 9:15 a.m. – 9:25 am**      **Passing Period – Students Will Move to the Designated Game Rooms**
- 9:30 a.m. - 10:30 a.m.**      **Session Two (60 minutes)**
- Grades Four & Five Games**
- Hex  
   Five-in-a-Row  
   Triplets  
   Mancala  
   Capture  
   (5<sup>th</sup> Grade Game TBD for Alternates – One of the Games Listed Above)
- 10:30 a.m. – 10:45 a.m.**      **Break / Snacks**
- 10:45 a.m.**                      **Return to the Gymnasium**
- 10:50 a.m. – 11:30 a.m.**      **Awards Assembly – A. B. Miller Gymnasium**

## General Event Information

1. Coaches will receive student name badges during the week before Math Field Day. Students and coaches first report to the gymnasium at A.B. Miller and should already be wearing their name badges.
2. This year there will be two separate teams during the morning competition. Each elementary school may bring a one 4<sup>th</sup> grade team and one 5<sup>th</sup> grade team. **Two students** from each grade level team, per school should complete the Team Tie-Breaker question located at the registration table in front of the gym **before 8:00 am** to allow time to report to the testing rooms.
3. All teams will meet in the gymnasium before being excused to the assigned rooms. Students and proctors are to report to assigned rooms in the Math building based on grade level and event. Signs will be posted on all classroom doors. The students should review the map of A. B. Miller to identify the classrooms of their events.
4. For the tests, scantrons will show five (5) choices. Some sample tests and actual test items may have 4 or 5 choices. If no choice “e” is given, there is no option to mark “e” as an answer.
5. **ALL** test events will include a math question as a tiebreaker.
6. Calculators will be provided on the day of the event for those events requiring their use.
7. Discuss with your team the ethics of cheating. If a student feels the game or event was not fair, this student needs to bring the matter to the attention of the proctor **before leaving the room**.
8. Two to three proctors will be trained and assigned to each event.

**Grades 4 & 5**

**MATH FIELD DAY  
TESTS**

# Terminology Tournament – 60 minutes

Grades 4 & 5

This is a fifty-question multiple-choice test that involves mathematical, geometrical, statistical and measurement terms as well as various mathematical formulas that are used. Calculators are not used on this event. No talking is allowed.

## Examples of Terminology Questions:

**1. A change of position that produces a mirror image of the figure is:**

- a) slide                              b) flip (reflection)                              c) turn (rotation)                              d) angle

**2. Numbers that are easy to compute mathematically are called:**

- a) compatible                              b) whole numbers                              c) integers                              d) factors

**3. An exact location in space is called:**

- a) vertex                              b) ray                              c) edge                              d) point

**4. Lines in the same plane that never intersect are called:**

- a) perpendicular                              b) straight                              c) parallel                              d) curved

**5. A space figure with one circular base and one vertex is called:**

- a) cone                              b) rectangular prism                              c) cylinder                              d) cube

**6. The number that occurs most often in a set of data:**

- a) median                              b) mean                              c) mode                              d) range

**7. An equation written in horizontal form is a(n):**

- a) number sentence                              b) numerical form                              c) expression                              d) variable

**8. Two operations that have the opposite effect:**

- a) inverse operations                              b) identical operations                              c) order of operations                              d) linear operations

**9. Lines that have exactly one point in common are:**

- a) parallel lines                              b) intersecting lines                              c) equidistant                              d) perpendicular

# Calculator Challenge – 60 minutes

## Grades 4 & 5

This is a fifty-question multiple-choice test where students are asked to use a calculator to determine which answer is closest to the truth. Students **do not** write on the test or scratch paper. All computations are done using the calculator only. A calculator is provided for this event. No talking is allowed.

### Examples of Calculator Challenge Questions:

1. Which fraction is the closest in value to  $\frac{6}{9}$ ?

- a)  $\frac{4}{7}$                       b)  $\frac{1}{3}$                       c)  $\frac{5}{9}$                       d)  $\frac{14}{21}$                       e) none

2. Find the value of the expression:

$$15 - 14 + 13 - 12 + 11 - 10 + 9 - 8 + 7 - 6 + 5 - 4 + 3 - 2 + 1 =$$

- a) -1                      b) 0                      c) 1                      d) 8                      e) none

3.  $\frac{1}{2}$  is what percent of 20?

- a) 10%                      b) 20%                      c) 2.5%                      d) 40%                      e) none

4.  $19 + 4 \times 3 + 20 - 1 =$

- a) 50                      b) 506                      c) 45                      d) 141                      e) none

5.  $139 \times (487 + 682 + 431) =$

- a) 431                      b) 1739                      c) 68,806                      d) 222,400                      e) none

6. Use your calculator to change this fraction into a decimal:  $\frac{17}{21}$

- a) 0.01721000                      b) 0.8095238                      c) 1.2352941                      d) 17.21                      e) none

9. Add the numbers which have 5 in the tens place

3456      3524      5001      4652

- a) 16663                      b) 8525                      c) 8108                      d) 8176                      e) none

10.  $26 + 32 \div 2 =$

- a) 29                      b) 42                      c) 17                      d) 30                      e) none

11.  $1.3 \times 10 + .5 =$

- a) 13.05                      b) 13.5                      c) 13.65                      d) 19.5                      e) none

**Find the missing operations for numbers 16-17**

**10.  $280 \_ ( 40 \_ 70 ) = 160$**

- a)  $\times, \div$                       b)  $\div, \times$                       c)  $\times, \times$                       d)  $-, \times$                       e) none

**11.  $( 555 \_ 111 ) \_ 444 = 0$**

- a)  $\div, +$                       b)  $-, \div$                       c)  $-, -$                       d)  $\div, \div$                       e) none

**Find the missing digits for number 18-19.**

**12.  $46 \_ \times \_ 9 \div ( 4 \times \_ ) = 912.6$**

- a) 8 , 3 , 2                      b) 3 , 2 , 4                      c) 6 , 9 , 5                      d) 8 , 3 , 5                      e) none

**13.  $\sqrt{2 \_} + ( \_ 3 \_ \div 5 ) = 51.6$**

- a) 5 , 5 , 2                      b) 5 , 2 , 5                      c) 5 , 2 , 3                      d) 6 , 5 , 2                      e) none

**14. To get the smallest product of 5, 3, 1, and 2**

- a)  $35 \times 21$                       b)  $53 \times 21$                       c)  $51 \times 32$                       d)  $52 \times 31$                       e)  $15 \times 23$

**15. Donald bought six items at the store. He knows the prices of 5 of the items:**

**\$15.92**

**\$8.71**

**\$13.51**

**\$6.42**

**\$23.87**

The total cost of the six items is \$95.17. What is the cost of the missing item?

- a) \$62.03                      b) \$26.47                      c) \$13.62                      d) \$26.74                      e) \$11.98

# Problem Solving – 60 minutes

Grades 4 & 5

This is a fifty-question multiple-choice test where students are asked to solve mathematical problems and determine which answer is closest to the truth. Students may use scratch paper and a calculator. A calculator is provided for this event. No talking is allowed.

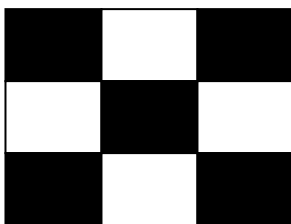
## Example of a Problem Solving Tournament:

Use the table below to solve numbers 1-2.

**Bus Service from Fontana to Rialto**

	Weekday	Weekend	Holiday
Non-stop	\$12.95	\$13.50	\$15.50
1-stop	\$11.95	\$13.00	\$14.75
Local	\$10.00	\$12.00	\$14.00
Charter	\$20.95	\$25.00	\$27.95

1. If you wanted to ride the bus on New Year's Day, how much more would it cost to ride a nonstop than a 1-stop?  
a) \$0.50                      b) \$0.75                      c) \$1.75                      d) \$2.00                      e) none
2. How much does it cost to take a 1-stop bus on a Thursday?  
a) \$11.95                      b) \$12.95                      c) \$13.00                      d) \$14.75                      e) none
3. Joshua has less than 30 pencils. When he puts them in groups of three, he has no pencils left. When he puts them in groups of 2, he has 1 pencil left over. He then places them in groups of 5 and has 1 pencil left over. How many pencils does Joshua have?  
a) 12                              b) 15                              c) 18                              d) 21                              e) none
4. If a housefly lands on one of these tiles, what is the probability that he will land on a white tile?



- a)  $\frac{4}{9}$                               b)  $\frac{5}{9}$                               c)  $\frac{1}{6}$                               d)  $\frac{1}{2}$                               e) none
5. You are building a staircase of blocks.  
1 step = 1 block  
2 steps = 3 blocks  
3 steps = 6 blocks  
How many blocks will it take to build a staircase that is 9 steps high?  
a) 36 cubes                      b) 28 cubes                      c) 21 cubes                      d) 45 cubes                      e) none

6. The rows will have equal sums if one number from each row is moved to the other row. Which number should be moved?

Row 2:      3      8      5

Row 1:      7      9      4

- a) 8 & 7                  b) 3 & 9                  c) 8 & 4                  d) 5 & 7                  e) none
7. What do all of these numbers have in common?

**15, 30, 33, 60, 21, 45, 63**

- a) They are even    b) They are odd    c) They are multiples of 3    d) 25    e) none
8. There are 75 jellybeans in a 3 oz. box. You and 2 friends are going to share a 6 oz. box. About how many will each person get?

- a) 25 raisins                  b) 35 raisins                  c) 50 raisins                  d) 75 raisins                  e) none

9. From the following clues, guess how many students are in Mrs. Smith's class

There are more than 15 students.

There are fewer than 35 students.

I say the number when I count by twos and tens

I don't say the number when I count by fours.

- a) 30                  b) 16                  c) 20                  d) 40                  e) none

10. If today is Wednesday, what day will it be in 23 days?

- a) Wednesday    b) Thursday    c) Friday    d) Saturday    e) none

# Mental Gymnastics – 60 minutes

Grades 4 & 5

## Directions:

Each student will receive a sheet of possible answers and a scantron to record their answers. **Students will NOT be allowed the use of scratch paper or calculators.** The students will be listening to an audio CD for this event. Once the CD has begun, **no interruptions are possible.** Students must be certain that they are totally prepared before beginning.

The CD will instruct students to place their pencil on the desk before the beginning of each problem. Each problem number will be announced before the problem. After the end of the problem, the CD will say “equals”. At this time, the student may pick up his/her pencil and bubble in the correct answer. Between 5 and 10 seconds later, depending upon the difficulty of the previous problem, the CD will instruct the students to place his/her pencil on the desk and then proceed with the next problem.

## Notes:

1. All problems will have the answer choice “Not Given”. This choice will be a valid choice for some problems.
2. Every attempt will be made to read a problem at a constant speed. It should be noted that not all problems will be read at the same speed.
3. Students are to do all computations mentally. The use of pencils, calculators, or other aides will disqualify the student.
4. Because students are expected to do the computation in the order presented, **order of operations** will be suspended for this event.

## Sample Mental Gymnastics Problems

(\*indicated multiplication; / indicates division, not a fraction):

1)  $76-2+4-6/8*4/6+4*5/10+3/2=$

2)  $12-5*4-5+9/8*4+9/5+9=$

3)  $20/5*6/8+5*6/4*3/9*8=$

4)  $42/6*9/3/7+9*6/8+6*4=$

5)  $5+6+7+3+6+8+9+3+6+5=$

6)  $9+7+5+12+9+8+3+6+8+4=$

7)  $7+4-3+5+9-7-8+6+11-5=$

8)  $3*3/3+3-3*3-3*3-3-3=$

9)  $5*5+5/5+5*5-5/5-5=$

10)  $2*2+2*2-2/2+2*2-2/2=$

11)  $15/3 \cdot 4 \cdot 5 \cdot 2/10 + 10 - 2/7 =$

12)  $4 + 4 \cdot 4 - 4/7 \cdot 12 + 2/10 + 5 + 10 - 3 + 8 =$

13)  $25/5 + 95/5 - 15 + 5 \cdot 0 \cdot 10/2 + 20 =$

14)  $9 + 8 + 7 + 6 + 5 + 4 + 3 + 2 + 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 =$

15) 10% of 365 =

16) 50% of 700 =

17) 25% of 440 =

18) 90% of 600 =

19)  $12 \cdot 24 =$

20)  $16 \cdot 22 =$

21)  $5 \cdot 720 =$

22)  $75 \cdot 6 =$

23) One-fourth times two-fifths =

24) One-half times three-fifths =

25) If John has three blue pencils, Mary has four red pencils, and Fido has two white bones, the number of pencils they have between them equals.

# Mental Gymnastics Student Answer Sheet

- |               |          |          |           |              |
|---------------|----------|----------|-----------|--------------|
| 1. A) 4       | B) 8     | C) 2     | D) 5      | E) Not given |
| 2. A) 5       | B) 33    | C) 14    | D) 25     | E) Not given |
| 3. A) 4       | B) 36    | C) 12    | D) 32     | E) Not given |
| 4. A) 72      | B) 15    | C) 72    | D) 60     | E) Not given |
| 5. A) 47      | B) 53    | C) 40    | D) 37     | E) Not given |
| 6. A) 71      | B) 67    | C) 65    | D) 68     | E) Not given |
| 7. A) 24      | B) 19    | C) 23    | D) 33     | E) Not given |
| 8. A) 11      | B) 33    | C) 12    | D) 0      | E) Not given |
| 9. A) 10      | B) 50    | C) 6     | D) 5      | E) Not given |
| 10. A) 12     | B) 14    | C) 6     | D) 4      | E) Not given |
| 11. A) 36     | B) 34    | C) 24    | D) 240    | E) Not given |
| 12. A) 17     | B) 20    | C) 25    | D) 10     | E) Not given |
| 13. A) 0      | B) 20    | C) 10    | D) 100    | E) Not given |
| 14. A) 109    | B) 89    | C) 90    | D) 100    | E) Not given |
| 15. A) 3650   | B) 365   | C) 36.5  | D) 3.65   | E) Not given |
| 16. A) 3500   | B) 35000 | C) 350   | D) 35     | E) Not given |
| 17. A) 11000  | B) 1100  | C) 110   | D) 11     | E) Not given |
| 18. A) 54000  | B) 60    | C) 600   | D) 5400   | E) Not given |
| 19. A) 264    | B) 288   | C) 240   | D) 48     | E) Not given |
| 20. A) 352    | B) 320   | C) 32    | D) 3520   | E) Not given |
| 21. A) 3400   | B) 3500  | C) 3600  | D) 3700   | E) Not given |
| 22. A) 375    | B) 450   | C) 150   | D) 300    | E) Not given |
| 23. A) $8/5$  | B) $2/9$ | C) $3/9$ | D) $3/20$ | E) Not given |
| 24. A) $3/10$ | B) $4/7$ | C) $3/7$ | D) $4/10$ | E) Not given |
| 25. A) 9      | B) 14    | C) 2     | D) 7      | E) Not given |

## Round Robin Test – 60 minutes

### Grades 4 & 5

This test consists of 50 questions that will come from all of the other 4<sup>th</sup> or 5<sup>th</sup> grade tests. Approximately 25% of the test items will be from each of the following areas: Mental Gymnastics, Problem Solving, Calculator Challenge and Terminology. **One** student from each grade level per school will compete in this event. Each student will receive a sheet of possible answers and a scantron to record their answers.

The students will first compete in the Mental Gymnastics portion of the test. **Students will NOT be allowed the use of scratch paper or calculators.** The students will be listening to an audio CD for this event. Once the CD has begun, **no interruptions are possible.** Students must be certain that they are totally prepared before beginning.

After the mental gymnastics portion of the exam, the students will begin working on the rest of the test. Students **may** use scratch paper and a calculator. A calculator is provided for this event (except during the Mental Gymnastics portion). No talking is allowed.

Each student will turn in a single answer sheet with his or her answers.

For sample problems of the Round Robin Test, refer to the test information provided on pages 5-12 of the packet.

# **MATH FIELD DAY GAMES**

## MATH FIELD DAY GAME PACKET

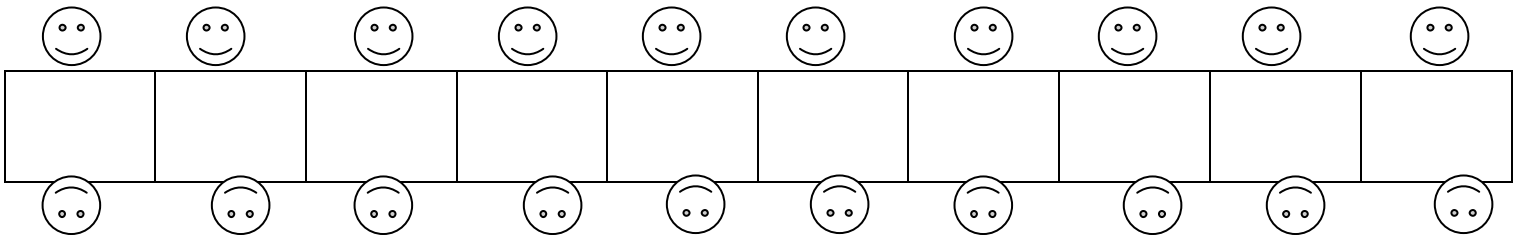
The games are played during the second hour of the competition. The games provide students with another opportunity to earn an individual medal and points for their school.

The games that will be played by 4<sup>th</sup> and 5<sup>th</sup> grades this year are:

1. Hex
2. Five-in-a-Row
3. Triplets
4. Mancala
5. Capture

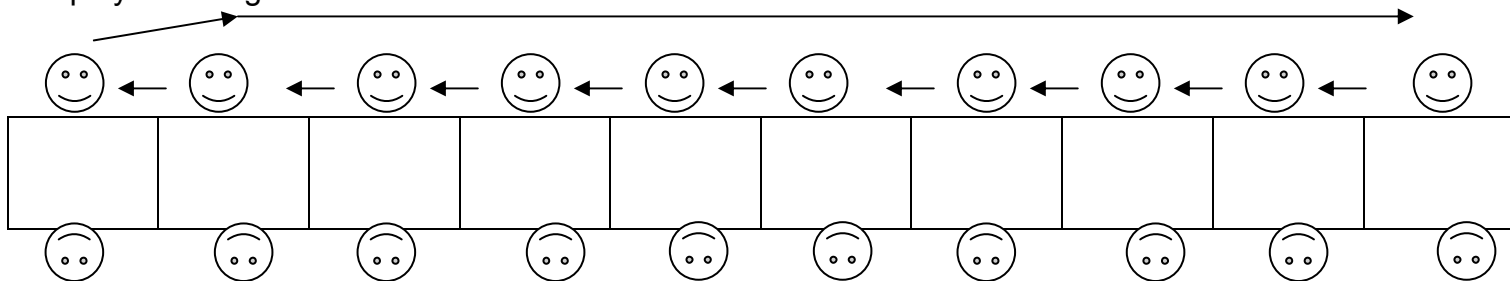
## GENERAL RULES FOR GAMES

1. Students report to assigned rooms based on grade level and event.
2. Students are to be seated while games are in progress, and only move/rotate at the end of the round (with proctor direction).
3. Individual games will have a total limit of 5-6 minutes, depending on the number of students present in each room.
4. There will be a 20-second limit for an individual to make his/her move in any game.
5. **Once a player's pencil touches the paper (game sheet), the play (the move) must be made. The player cannot change his/her mind.**
6. The desks will be setup in one long row. Students will be seated on opposite sides of the table, facing each other.
7. If students cannot agree who will go first, then "rock, paper, scissors" determines who goes first.

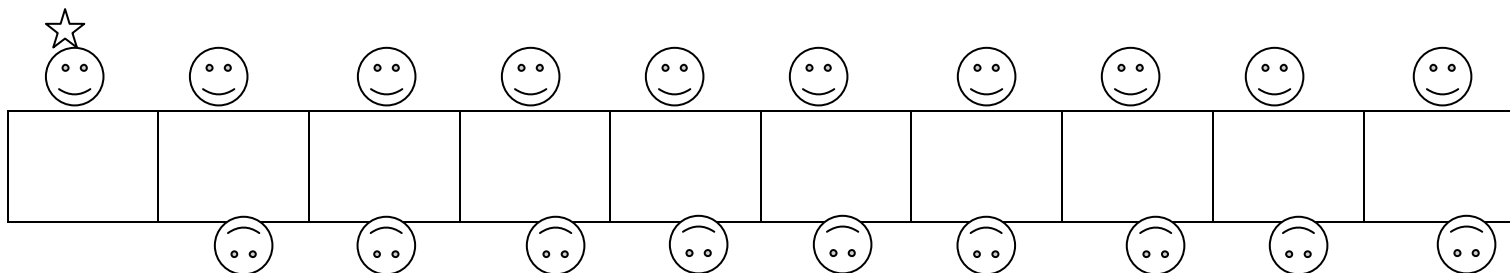


8. Once the first game is played, the players will let the table proctor know they have finished. The proctor will circle if it is a win, lose or tie.

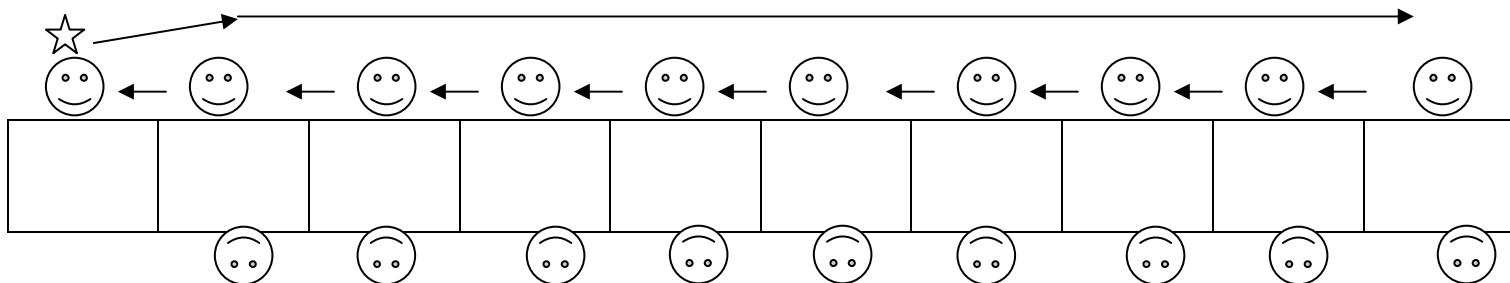
9. One side of the row will rotate after the completion of each round. The side that rotates after the first round, will be the same side that rotates after each additional round. At least seven rounds should be played during the event.



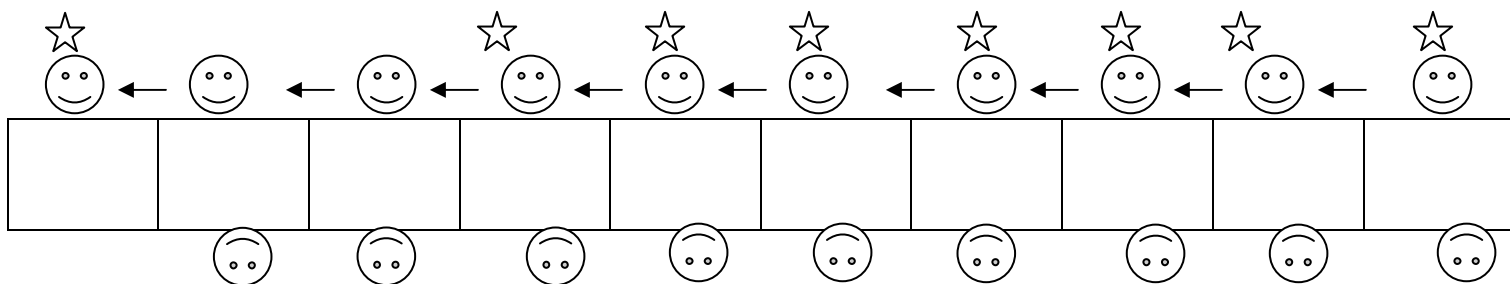
10. If there are an odd number of students in the room, the last student will sit out during the first game.



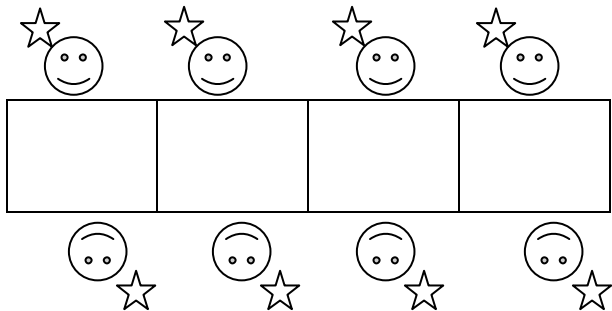
11. When there are an odd number of students, an even number of rounds should be played (either 6 or 8 depending on time.)



12. At the end of Round 8 (or 6 depending on time) . . .



The students who sat out each round should play each other for their final round. Every student in the room should have played the same number of rounds.



13. Scoring Sheet: The following scores need to be used: 2 points for a win, 1 point for a tie, 0 points for a loss. The proctor will circle 2 or 1 or 0 on the score sheet. The proctor will collect the score sheets and complete the total column at the end of the final round.

Example:

Game	Round	Win	Tie	Loss	Proctor Initials
Game 1	Round 1	2	1	0	
Game 2	Round 2	2	1	0	
Game 3	Round 3	2	1	0	
Game 4	Round 4	2	1	0	
Game 5	Round 5	2	1	0	
Game 6	Round 6	2	1	0	
Game 7	Round 7	2	1	0	
Game 8	Round 8	2	1	0	
Tie Breaker Games	Tie Breaker Round	Win	Tie	Loss	Proctor Initials
Game 1	Round 1	2	1	0	
Game 2	Round 2	2	1	0	
Game 3	Round 3	2	1	0	

14. At the end of the final round, the scores are tallied. The students with the highest matching scores are placed from 1<sup>st</sup> through 5<sup>th</sup> place. If there is a tie for any place, those students who are tied will compete against each other in a bonus round.

# **GAMES**

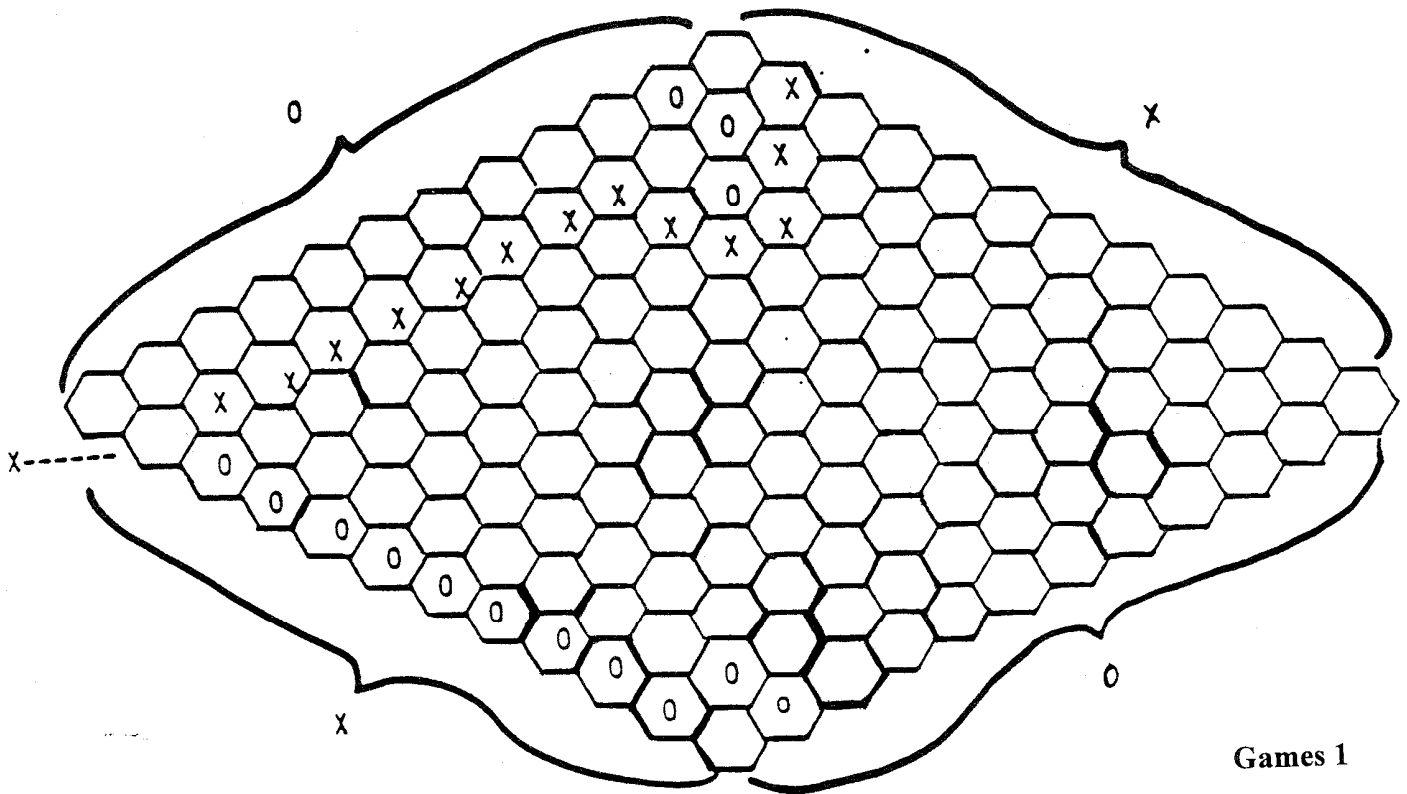
# HEX

## Description:

This game is similar to the commercially available game of Bridge-It. The game helps students develop the idea of finding patterns in a maze. The winner must form a continuous path from his or her starting side to the opposite side of the rhombus by connecting the hexagons on their edges.

Players take turns placing their marks (either X or O) in the hexagons of their choosing. Each consecutive turn does not have to be adjacent to the parallel sides. Note that the four corner hexagons can actually be considered to be part of either of the sides that they face.

In the sample below, X can win by placing a mark in the hexagon indicated.

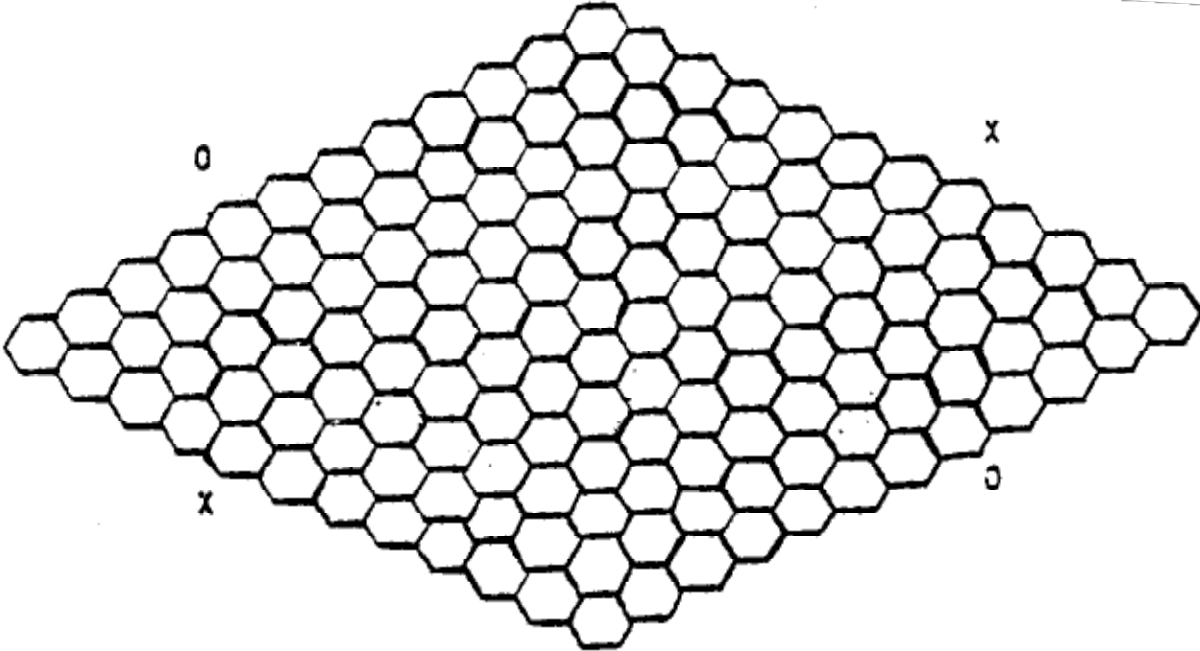


# Math Field Day

Student 1: \_\_\_\_\_

Student 2: \_\_\_\_\_

## HEX

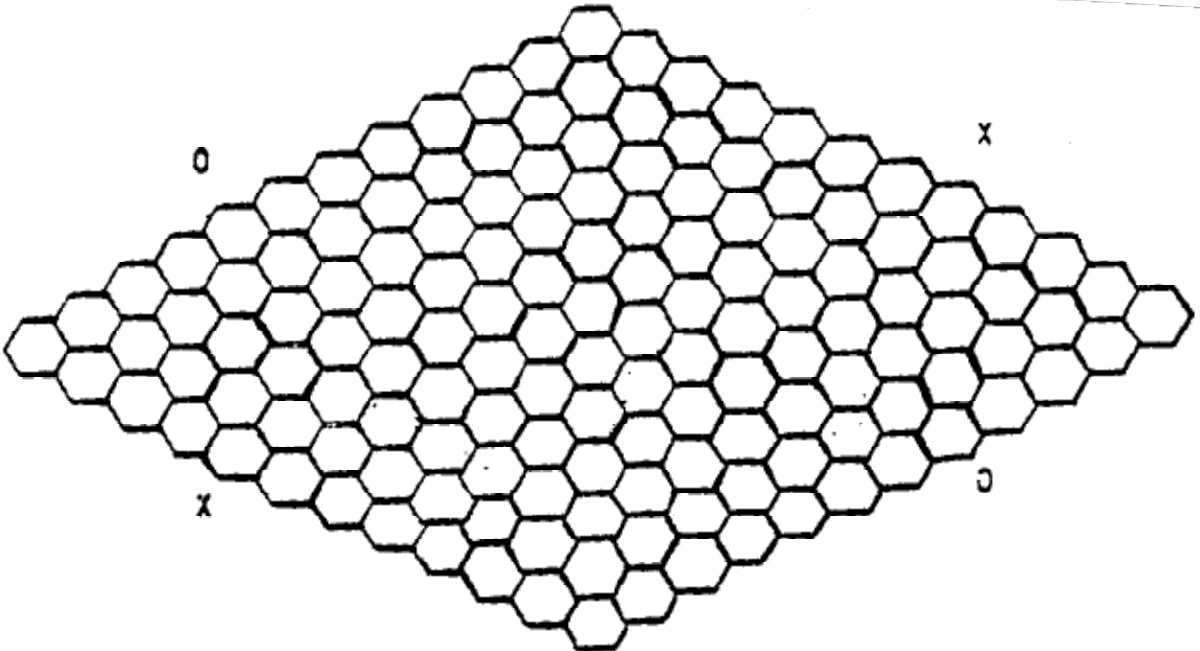


# Math Field Day

Student 1: \_\_\_\_\_

Student 2: \_\_\_\_\_

## HEX



# FIVE-IN-A-ROW

## Description:

This game is similar to two-dimensional tic-tac-toe. It is played on graph paper and the number of squares to be used is limited only by the size of the paper. Players alternately mark “X” and “O” in the squares. The first player to get five-in-a-row horizontally, vertically, or diagonally – is the winner.

In the example below, “X” wins.

			O								
			O	X		O				O	
			O	X	X	X	O		X		
					X	X	X	O		X	
					O	X	X	X	O	X	
						O	X	O	O		
								X			

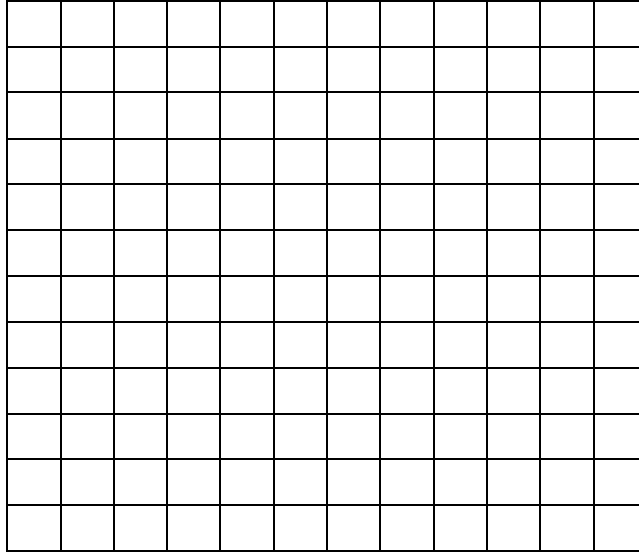
**Math Field Day grids for Five-In-A-Row are 12 x 12 boxes.**

# Math Field Day

Student 1: \_\_\_\_\_

Student 2: \_\_\_\_\_

## FIVE-IN-A-ROW

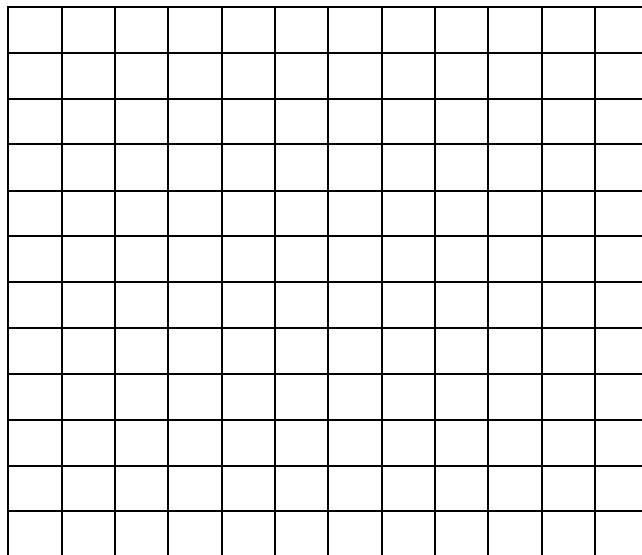


# Math Field Day

Student 1: \_\_\_\_\_

Student 2: \_\_\_\_\_

## FIVE-IN-A-ROW



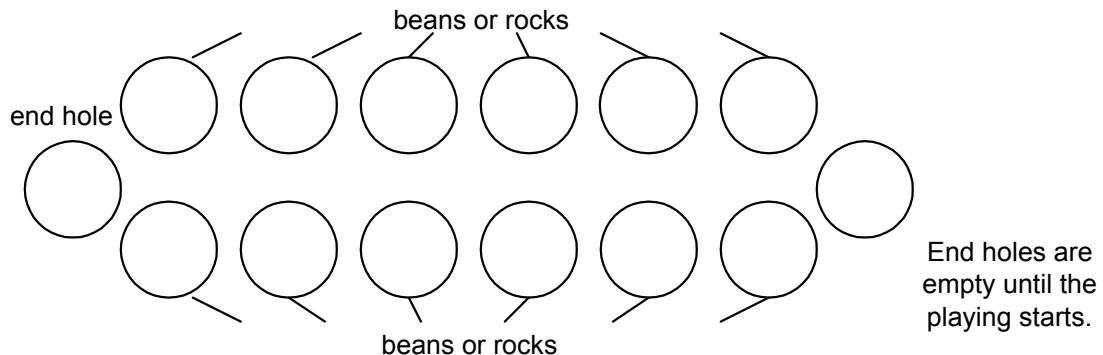
# Mancala

## Description:

There are many versions of Mancala. It originated in ancient Egypt, and is one of the oldest games in the world. You can play it on a special Mancala board, if you have one, or by using any small containers you have at hand. (If you are outdoors, you can play it simply by scooping out little holes in the earth.)

This is one of the easiest versions, but it is as fascinating as the more complex versions, and just as good today as it was thousands of years ago.

Set out your “board” like this.



Put two beans in each “hole” except for the ones on the ends. Those end holes are common property, and belong to both players.

One player starts, scooping up all the beans from one of the holes on his or her side of the board, **places the beans in one hand, and distributes them with the other hand – one bean to a hole – in each of the next holes moving toward the right, including the holes on the end.** Once a bean lands in the end holes, it is out of play.

The object of the game is to be the first player to get rid of all the beans on your side of the board.

If a player’s last bean falls into the end hole, he or she **must** go again, and can choose any hole on his or her side of the board, scoop out the beans, place them in one hand, and distribute them one by one in the holes to the right.

If the **last bean** lands in a hole which is on the other player’s side of the board, and there are no beans at all in that player’s hole, player A has the option to **scoop out the opposite hole (on his side of the board) and distribute the beans one per hole as in regular play.** The player may choose not to do this. If he or she has no beans there, the turn is over.

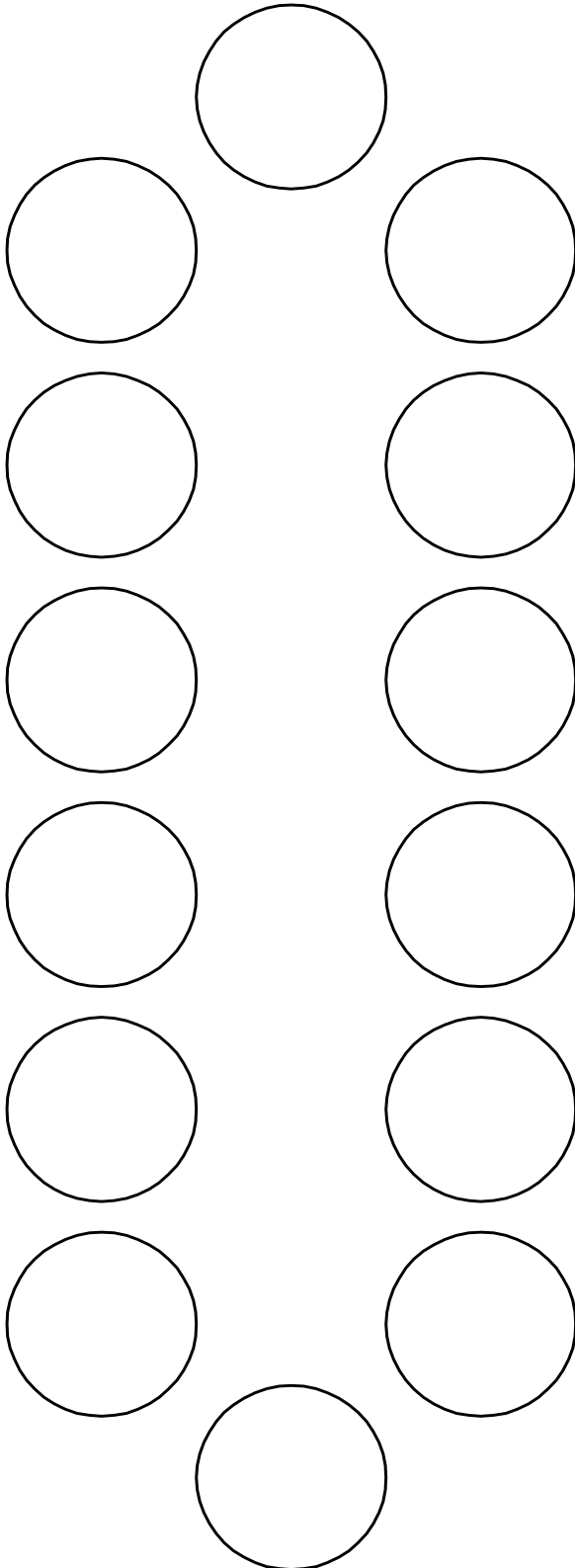
Student 1: \_\_\_\_\_

Student 2: \_\_\_\_\_

School: \_\_\_\_\_

School: \_\_\_\_\_

## MANCALA



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Winner of Competition Game

# CAPTURE

## Description:

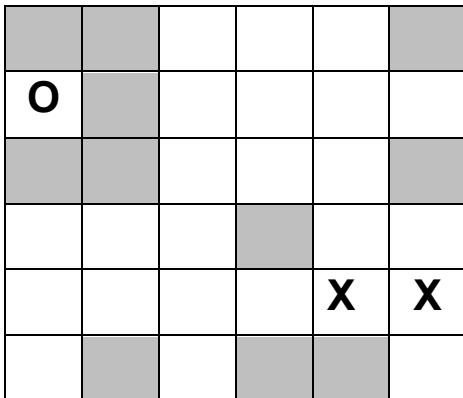
The game of Capture is a simple paper/pencil game played with two players on a 6 x 6 grid. Each player chooses a symbol; these could be an X or a 0. The objective of the game is to avoid placing your symbol in a straight or a diagonal course from the opponent. The players use logic along with the following rules to corner or capture the opponent.

The starting player marks his/her symbol in any square on the grid to begin the game. Player b then places his/her symbol in any square on the grid, avoiding a "direct hit". Competition begins when the first player moves from his/her mark, any number of squares in a straight line--horizontally, vertically or diagonally--to an unused space, and makes his/her mark on it. He/she crosses out the old mark. The opponent plays similarly observing the rule that a player may never move through a space previously played on and crossed out or through a space occupied by the opponent. The play continues until there is a winner. The winner either forces the opponent into a position from which he/she cannot play (figure A) OR "CAPTURES" the opponent by moving in the straight or diagonal line into the opponent's occupied square (figure B). **If both players are trapped, then the player who must move next loses.**

In example (figure A) the 0 player cannot move. The player with the X is the winner.

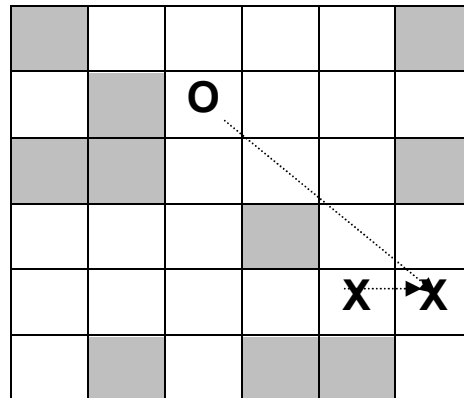
In example (figure B) 0 can move into the X's occupied square. Player O is the winner.

(A)



"X" is the winner because "O" cannot move.

(B)



"O" is the winner because "X" moved into "O's" diagonal. "O" can now move to make a "direct hit" in the "X" square.

**Math Field Day grids for Capture are 6 x 6 boxes.**

# Math Field Day

Student 1: \_\_\_\_\_

Student 2: \_\_\_\_\_

## Capture


# Math Field Day

Student 1: \_\_\_\_\_

Student 2: \_\_\_\_\_

## Capture


# TRIPLETS

## Description:

This game is similar to two-dimensional tic-tac-toe. It is played on graph paper and the number of squares to be used is limited only by the size of the paper. Players take turns marking the letter "X" in the squares. The goal of the game is to be the first player to get three-in-a-row horizontally, vertically, or diagonally. Players must use various strategies to keep the opposing player from scoring three-in-a-row first.

				X			X		
X									
								X	
X							X		
		X							
									X
								X	
X							X		
		X							X

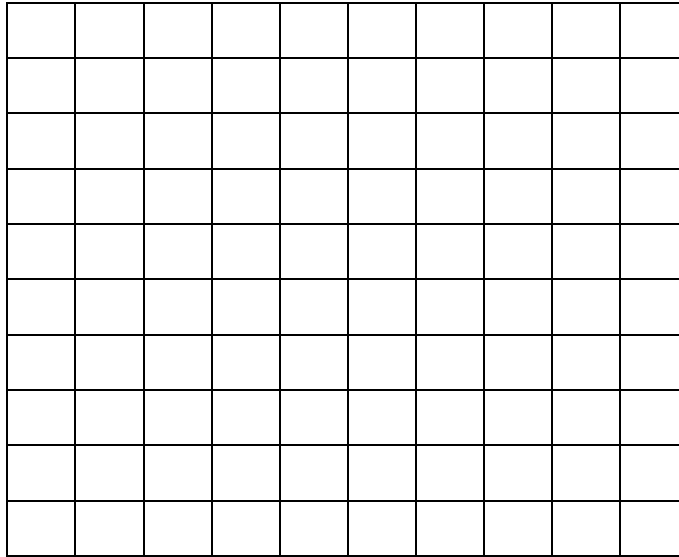
**Math Field Day grids for Triplets are 10 x 10 boxes.**

# Math Field Day

Student 1: \_\_\_\_\_

Student 2: \_\_\_\_\_

## Triplets



# Math Field Day

Student 1: \_\_\_\_\_

Student 2: \_\_\_\_\_

## Triplets

