Integer Games
for Math in Action 2011
This handout and all the games can be found at http://bit.ly/IntGames.

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As we consider games for the classroom, there are several possible purposes:

- they're fun.
- skill practice with engagement that worksheets can't match.
- sometimes the game can support the underlying concept development.
- sometimes they can be the context to help conceptual understanding.
- provide an opportunity for problem solving in the context of game playing strategy.

I often launch a game by playing me vs. the entire class. It tends to communicate more of the rules than just explaining them. I'll often have students play in two person teams to start, as their discussion helps work out understanding of the game and the mathematics. After the lesson, I'll try to engage students in a conversation about what they noticed, what their strategy was, and if they would change anything about the game.

The games for today: you will rotate through the tables, spending a few minutes trying out the game at each stop. This may not be enough to finish a game, but will hopefully give you an opportunity to get a good taste.

Game	Presenter	Content
Consecutive Capture	Emily Trybus	Integer representation on the numberline
Tug of War	Anne Harkema	Integer small number addition, especially positive + negative.
Close to Zero	Jill Beauchamp	Two digit integer addition, especially positive + negative
Zero Rummy	Cassie Becker	Integer addition with more than two summands, especially zero pairs and sums.
Gridfight	Kirsten Clemans	Integer multiplication
Honeycomb	Nick Smith	Integer multiplication and addition
+/−24	Emily Scothorn	Integer operations mixed plus order of operations

At the end we'll try to come back together to discuss which games you liked the best for your classroom and why.

Attached to this sheet is the classic Product Game, with an integer adaptation. The Product Game is an excellent game for adapting to other operations, if you are so inclined.

The Product Game

Currently appearing in the **Connected Mathematics Project** unit, *Prime Time: Factors and Multiples*. Available online at http://illuminations.nctm.org

1	2	3	4	5	6
7	8	9	10	12	14
15	16	18	20	21	24
25	27	28	30	32	35
36	40	42	45	48	49
54	56	63	64	72	81

1	2	3	4	5	6	7	8	9

Play begins with each player covering a factor from 1 to 9 at the bottom. The 2nd player then covers the product of those two numbers on the game board. The 1st player can then move either one of the factor numbers and covers the new product. Play continues until a player can cover four products in a row, horizontally, vertically or diagonally.

Integer Product Game

Players take turns moving one marker (it can be either from the top or bottom row) and covering the product of the two numbers. Both markers can be on the same number. The first to get four in a row (can be diagonal) wins the game. Take turns going first.

-36	-30	-25	-24	-20	-18
-16	-15	-12	-10	-9	-8
-6	-5	-4	-3	-2	-1
1	2	3	4	5	6
8	9	10	12	15	16
18	20	24	25	30	36

1	2	3	4	5	6
-1	-2	-3	-4	-5	-6