

Integer Operations Project {With Game boards}

Group Members _____

You have been chosen to create a board game for a math company.

The company only has the following requirements:

- **Topic – Integer, order of operations and equations**
- **Players – Four (or more) students must be able to play the game.**
- **Directions & Materials – Detailed**
 Your game must include a directions sheet. Please be as detailed as possible. Include a list of everything included in your game (dice, cards, pieces, etc.) Write neatly – or type!
- **Problems**
 Your game should include at least 20 integer problems. The 20 problems must consist of
 - 5 problems for order of operations order of operations (involving integers)
 - 2 problems solving 2-step equations (involving integers)
 - 2 problems solving multi-step equations (involving integers)
 - 1 problems with variables on both sides (involving integers)
 - 2 word problems
 - The other 8 problems you can do any type integer problems
- **Color & Creativity – Awesome**
 The game must be colorful and creative with a theme and neat. The company wants to make money off this game and it won't sell if it is boring!
- **Does it work? Is it fun?**
 Actually play the game. Does it work the way you want it to? If not, fix it!
- **Game board design:**
 You will be given four potential game boards. You do not have to use them if you do not want to. You can design your own!

BRAINSTORM WORKSHEET

Before you begin, brainstorm some ideas:

This should take about 10 minutes!

1. How will the players move around the board? (chips, game pieces, etc.)
2. How will questions be asked? (cards with problems on them, dice, playing cards, etc.)
3. How will students solve problems? (their own paper, paper provided with the game, etc.)
4. Will your game have a theme? (circus, carnival, sports, cars, etc.)
5. What else do you want to include?

Materials:

What materials will be needed for your game?

Theme:

Directions:

Write the directions for your game here.

*This is not the final draft of materials and directions.
 Your group will design something that looks like it would be found in a game box!*

PROBLEMS:

- Write out your 20 problems on a piece of notebook paper
- Make sure to include the answers
- Write your problems in the format below.

Types of Problems	Problems	Answers
• 5 Order of Operations Problems with Integers	1)	1)
	2)	2)
	3)	3)
	4)	4)
	5)	5)
• 2 Two-Step Equations with Integers	1)	1)
	2)	2)
• 2 Multi-Step Equations with Integers	1)	1)
	2)	2)
• 1 Equation with variables on both sides with Integers	1)	1)
	2)	2)
• 2 Word Problems	1)	1)
	2)	2)
• 8 Integer Problems – any type	1)	1)
	2)	2)
	3)	3)
	4)	4)
	5)	5)
	6)	6)
	7)	7)
	8)	8)

Integer Operations Project Rubric

Description	Possible Points	Your Points
Brainstorm Page (Page 1) Materials & Directions complete	5	
Twenty integer problems with correct answers (1 point for each correct problem)	(20 points total) 5	
<ul style="list-style-type: none"> • 5 problems for order of operations order of operations (involving integers) • 2 problems solving 2-step equations (involving integers) • 2 problems solving multi-step equations (involving integers) • 1 problems with variables on both sides (involving integers) • 2 word problems 	2	
	2	
	1	
	2	
	8	
<ul style="list-style-type: none"> • The other 8 problems you can do any type integer problems 	8	
Final game board with directions and all materials	(10 points total) Neat 5 pts Colorful 3 pts Theme 2 pts	
TOTAL POINTS		