

Box Cars and One-Eyed Jacks

NUMBER LINE MATH FOR GRADES 4-6

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February 5-6, 2015

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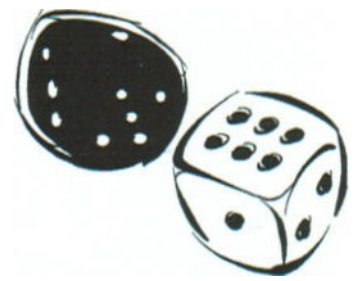


BoxCarsEduc



BoxcarsEducation

Betweeners



<i>Roll</i>	<i>Least</i>	<i>Between</i>	<i>Greatest</i>
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

1. Three players, each need the same type of dice.
2. Each player rolls their dice.
3. Players arrange the three numbers: *Least, Between, Greatest*.
4. *Between* WINS the round and scores one point
5. Record the rolls.
6. In the event of a tie, no points are awarded.

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Rounding Recording Sheet

Whole Numbers

Round	100s	10s	1s	Standard Form	Closest 10s place	Closest 100s place
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

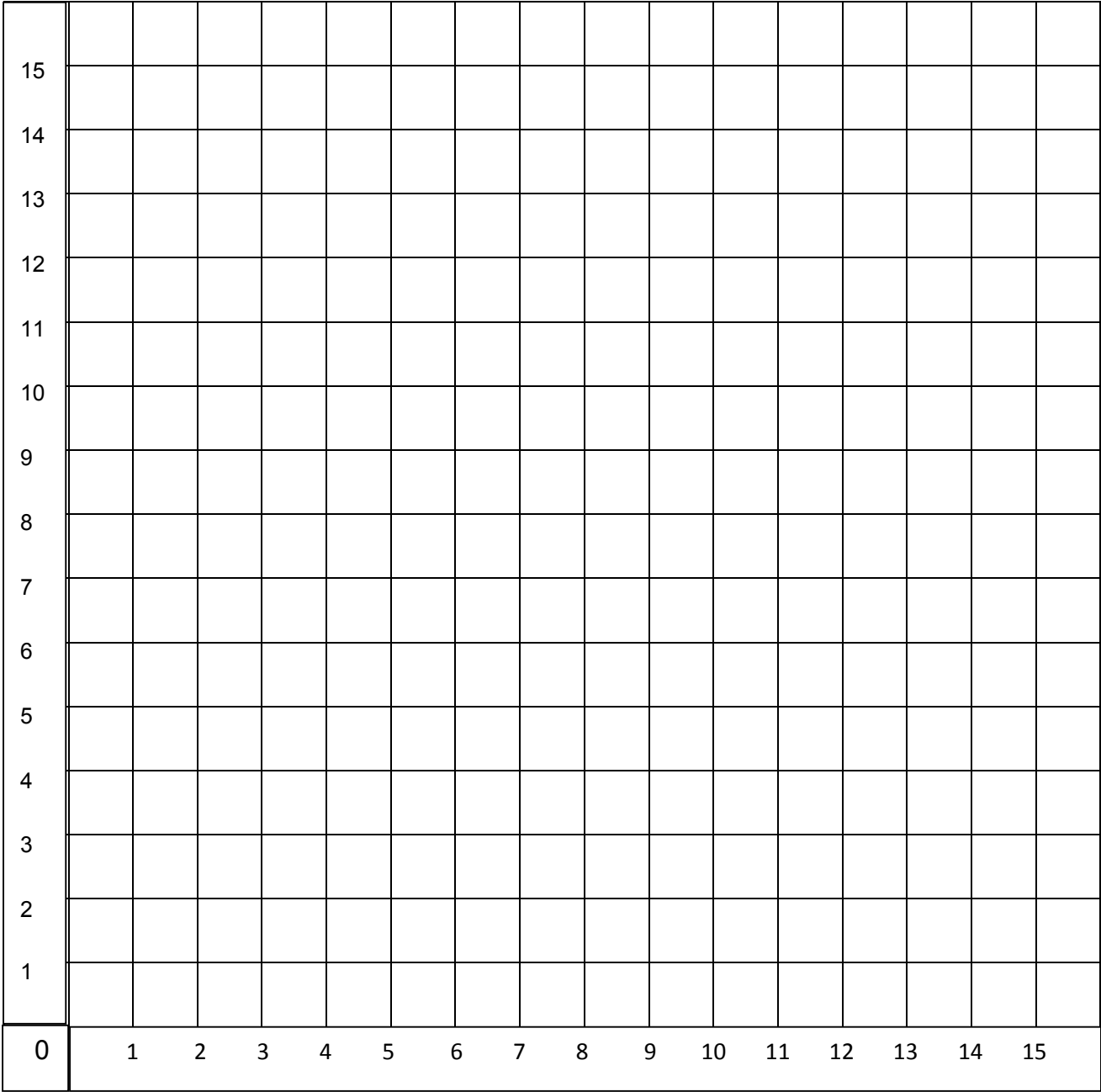
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Rounding Recording Sheet

Decimals

Round	1s (Ones 1)	10ths (Tenths 0.1)	100ths (Hundredths 0.01)	Standard Form	To The Closest 1s place	To The Closest 10ths place
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

Graph for Box Cars Number Lines



Rounding Recording Sheet

Turn	Rolled	Standard	Rounded To 10's	Rounded to 100's	Notes
example	400 , 20 , 7	427	430	400	
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

Number Line Integer Face Off

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- Level:** Grade 5 and up
- Skills:** Adding and Subtracting Integers
- Players:** 1 vs 1
- Equipment:** Cards, 2 number lines, bingo chips (optional)
- Objective/Goal:** To be the farthest from 0

Getting Started: The two number lines are set up so the 0's of each line are at the same location (see picture). Each player deals two cards face up and add them for a sum. Black cards are positive. Red cards are negative. Players add their two cards. The player who has the sum farthest away from 0 (positively or negatively) wins the round and places all 4 cards from the round into their point pile. Players can play for a specified number of rounds or for a set time limit. The player with the most cards in their point pile at the end of the game wins.

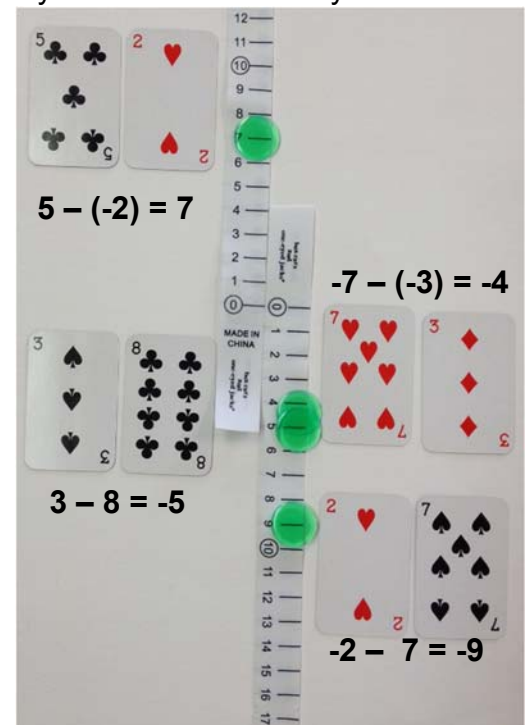
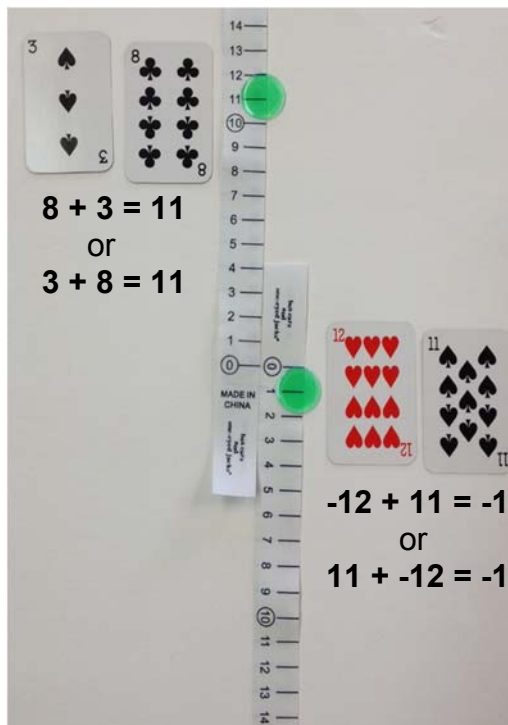
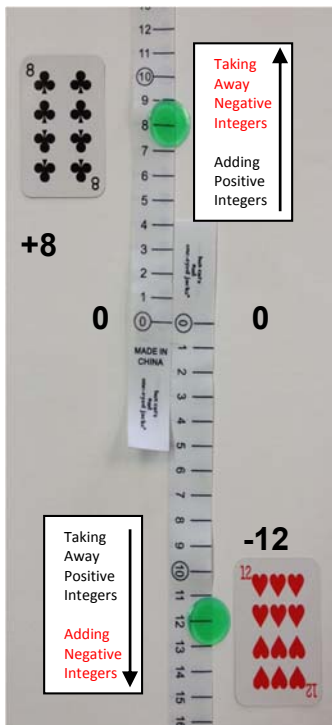
Adding Integers Face Off

Player One sum of 8 which is farther from 0 than Player Two's sum of -1

Subtracting Integers Face Off

Player One took -2 away from 5 = 7
 Player Two took -3 away from -7 = -4
 Player Three took 8 away from 3 = -5
 Player Four took -7 away from -2 = -9

Example of Set Up



Variation:

- (1) Players use subtraction to have a difference which is farthest from 0.
- (2) Players try to get as close to 0 as possible.

Fractions “Cents”

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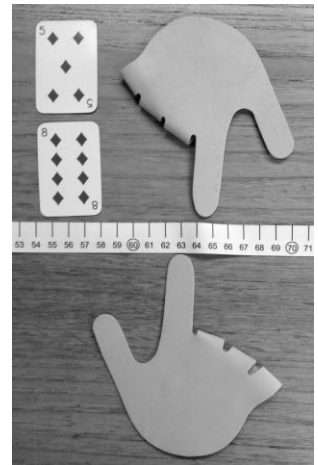
Grades: Grade 6 and up
Concept: Converting fractions to equivalent percent or decimal, mental math, division, estimation
Players: 1 vs 1
Equipment: Cards 1 to 12, Number Line 0-100, fraction/decimal/percent chart
Object / Goal: Earn points by having the most accurate answer when converting a fraction to its decimal or percent equivalent.

Set Up and Play: Each player begins with a deck of about half the cards in the game. Play begins with each player turning turn over the top card of their deck at the same time. Players count out loud “1, 2...5 POINT”. While they are counting, they are mentally arranging the cards into a “Proper Fraction (numerator/top smaller than or equal to denominator/bottom), and estimating/calculating the percent equivalent and recording that on paper. When they say “Point” each player places one finger on the number line at the number they think is correct (it is possible for both players to be on the same point) and say what their answer is. They check their accuracy by referring to the Fraction /Decimal /Percent chart or by using a calculator to divide the numerator by the denominator. If a player is the closest or exactly correct, they collect the cards from that round and place them into their point pile. In the case of a tie both players place the card they turned over into their point pile. If a player has not recorded an estimate, they automatically lose the round.

Example: Player One turned over a 5 and Player Two turned over an 8. When they said “point” Player One pointed to 63 and said “five eighths of 100% is 63%”. Player Two pointed to 65 and said “five eighths of 100% is 65%. 5 divided by 8 is 0.625 (62.5%). Player One was the closest and wins, placing both cards into their point pile.

Variation:

1. The number line is considered “1”. Players say the decimal equivalent when they voice their answer. In the example, Player One would have pointed to 63 and said “Five eighths of one is 0.63”. Player Two would have pointed to 65 and voiced “Five eighths of one is 0.65”. Exact answer is 0.625, Player One wins.
2. The number line is considered 100%. Players say the percent equivalent when they Voice their answer. In the example, Player One would have pointed to 63 and said “Five eighths of 100% is 63%.” Player Two would have pointed to 65 and voiced “Five eighths of 100% is 65%.”. Exact answer is 62.5%, Player One wins.



Round	Fraction	Equivalent	Player 1	Player 2	Observations / Comments
Example	$\frac{5}{8}$	62.5	63	65	Both of us were close!
1					
2					
3					
4					
5					
6					
7					
8					
9					