Alberta Teacher Conventions 2026

Fraction Action

Math Games For
Upper Elementary

Presented by John Felling

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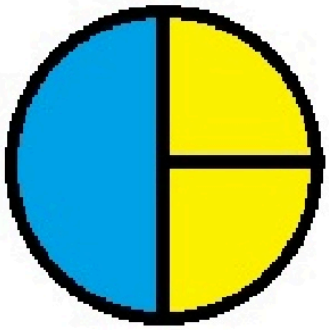
Fractions Decimals Percents

One Whole 1/1 1.00 100%										
One Half 1/2 0.50 50%	Two Halves 2/2 1.00 100%									
One Third 1/3 0.333 33%	Two Thirds 2/3 0.666 67%	Three Thirds 3/3 1.00 100%								
One Fourth 1/4 0.25 25%	Two Fourths 2/4 0.50 50%	Three Fourths 3/4 0.75 75%	Four Fourths 4/4 1.00 100%							
One Fifth 1/5 0.20 20%	Two Fifths 2/5 0.40 40%	Three Fifths 3/5 0.60 60%	Four Fifths 4/5 0.80 80%	Five Fifths 5/5 1.00 100%						
One Sixth 1/6 0.166 17%	Two Sixths 2/6 0.333 33%	Three Sixths 3/6 0.50 50%	Four Sixths 4/6 0.666 67%	Five Sixths 5/6 0.833 83%	Six Sixths 6/6 1.00 100%					
One Seventh 1/7 0.143 14%	Two Sevenths 2/7 0.286 29%	Three Sevenths 3/7 0.429 43%	Four Sevenths 4/7 0.571 57%	Five Sevenths 5/7 0.714 71%	Six Sevenths 6/7 0.857 86%	Seven Sevenths 7/7 1.00 100%				
One Eighth 1/8 0.125 12.5%	Two Eighths 2/8 0.25 25%	Three Eighths 3/8 0.375 37.5%	Four Eighths 4/8 0.50 50%	Five Eighths 5/8 0.625 62.5%	Six Eighths 6/8 0.75 75%	Seven Eighths 7/8 0.875 87.5%	Eight Eighths 8/8 1.00 100%			
One Ninth 1/9 0.111 11%	Two Ninths 2/9 0.222 22%	Three Ninths 3/9 0.333 33%	Four Ninths 4/9 0.444 44%	Five Ninths 5/9 0.555 56%	Six Ninths 6/9 0.666 67%	Seven Ninths 7/9 0.777 78%	Eight Ninths 8/9 0.888 89%	Nine Ninths 9/9 1.00 100%		
One Tenth 1/10 0.10 10%	Two Tenths 2/10 0.20 20%	Three Tenths 3/10 0.30 30%	Four Tenths 4/10 0.40 40%	Five Tenths 5/10 0.50 50%	Six Tenths 6/10 0.60 60%	Seven Tenths 7/10 0.70 70%	Eight Tenths 8/10 0.80 80%	Nine Tenths 9/10 0.90 90%	Ten Tenths 10/10 1.00 100%	
One Eleventh 1/11 0.091 9%	Two Elevenths 2/11 0.182 18%	Three Elevenths 3/11 0.273 27%	Four Elevenths 4/11 0.364 36%	Five Elevenths 5/11 0.454 45%	Six Elevenths 6/11 0.545 55%	Seven Elevenths 7/11 0.636 64%	Eight Elevenths 8/11 0.727 73%	Nine Elevenths 9/11 0.818 82%	Ten Elevenths 10/11 0.909 91%	Eleven Elevenths 11/11 1.00 100%
One Twelfth 1/12 0.083 8%	Two Twelfths 2/12 0.166 17%	Three Twelfths 3/12 0.25 25%	Four Twelfths 4/12 0.33 33%	Five Twelfths 5/12 0.417 42%	Six Twelfths 6/12 0.50 50%	Seven Twelfths 7/12 0.583 58%	Eight Twelfths 8/12 0.667 67%	Nine Twelfths 9/12 0.75 75%	Ten Twelfths 10/12 0.83 83%	Eleven Twelfths 11/12 0.92 92%	Twelve Twelfths 12/12 1.00 100%

The Solution

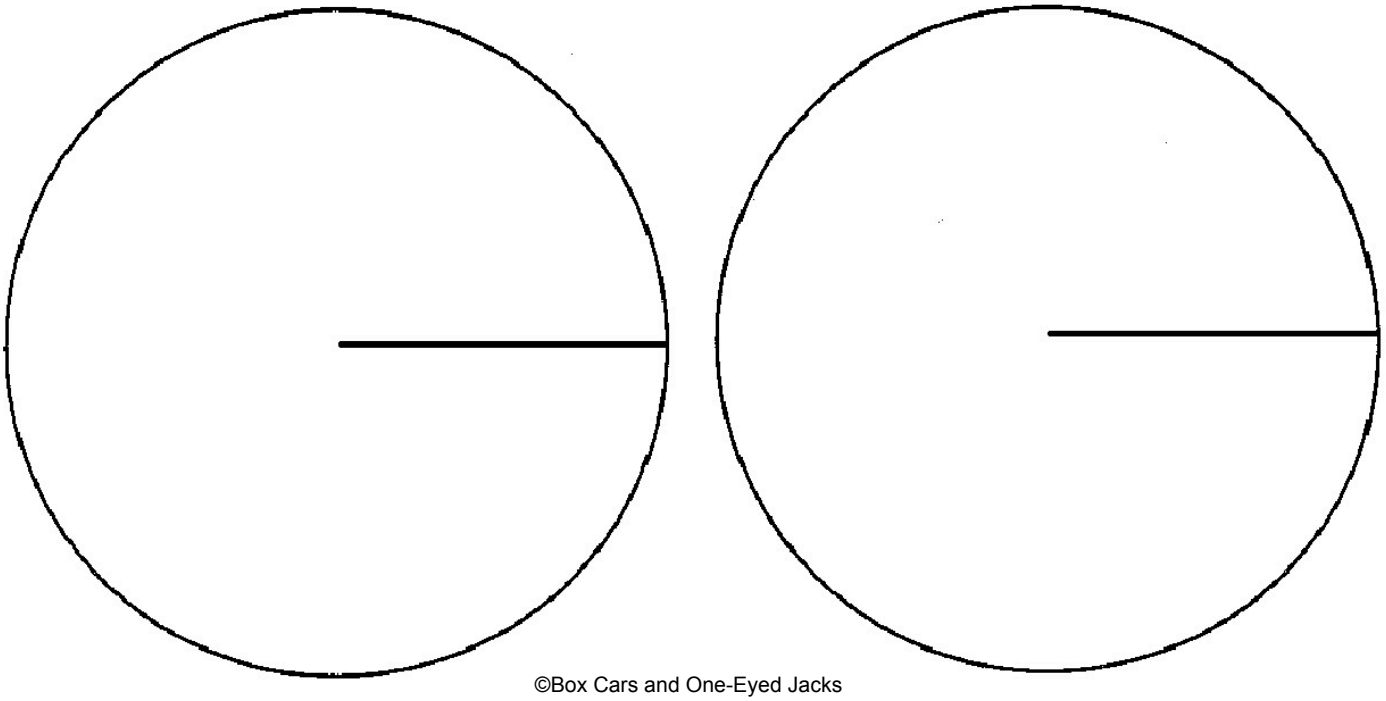


USE FRACTION PIECES

- To make complete circle (no spaces, no overlap)
- Can you make 9 complete circles with no pieces left over?
- Record your solutions.

Math Journal- How many different solutions are possible?

Fraction Estimator



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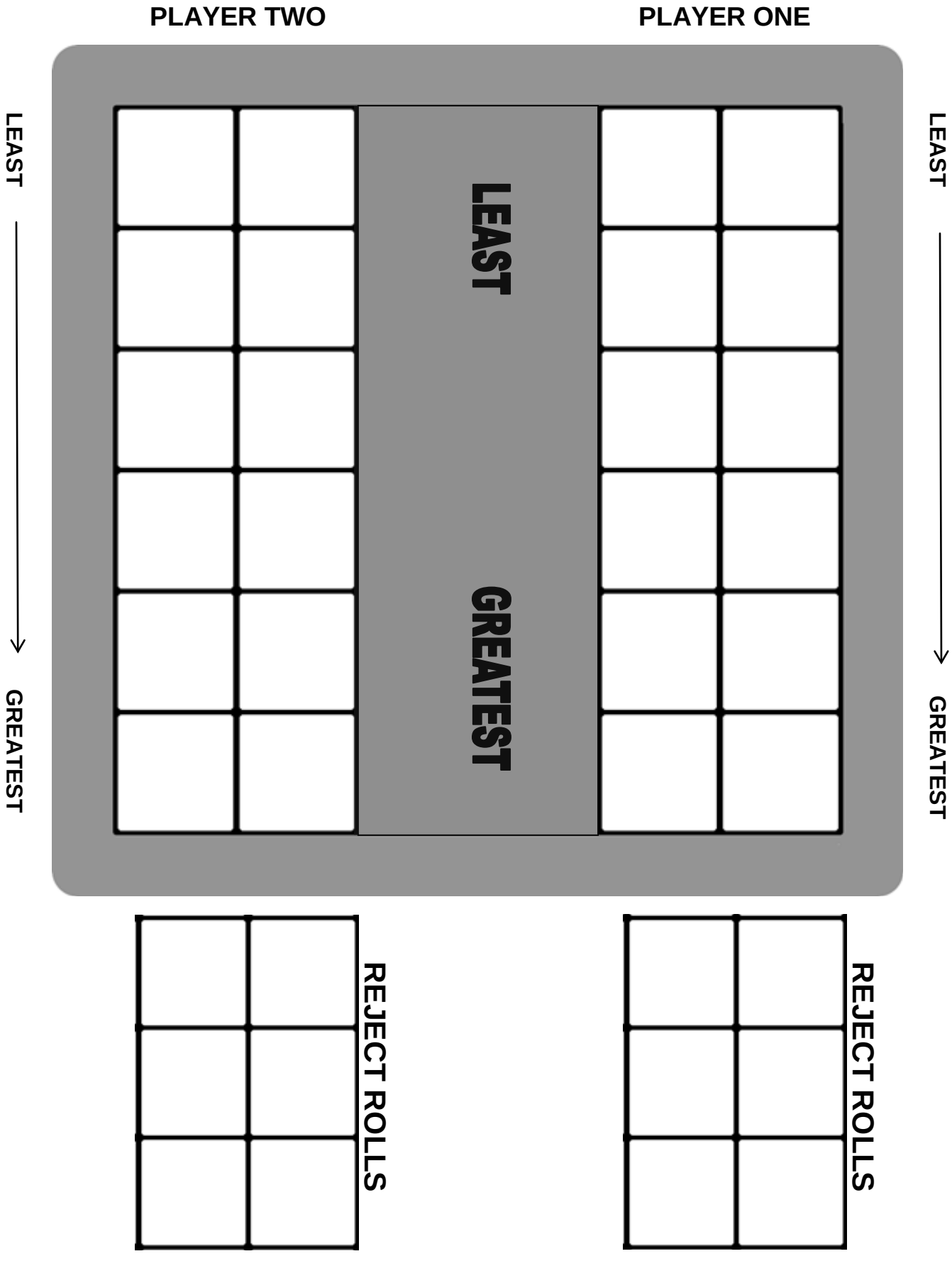
Roll On Fractions - Elementary



Roll On Fractions - Elementary

FRACTION EQUIVALENT RECORDING SHEET

ROLL	MY ROLLED FRACTION	MY REDUCED FRACTION *if necessary*	DECIMAL EQUIVALENT	PERCENT EQUIVALENT
1				
2				
3				
4				
5				
6				
7				
8				
9				

EQUIVALENT FRACTION ACTION RECORDING SHEET

SHAKE ONE

Numerator							
Denominator							
Equivalent Fractions							

Ordered Least _____ _____ _____ _____ _____ _____ _____ Greatest

SHAKE TWO

Numerator							
Denominator							
Equivalent Fractions							

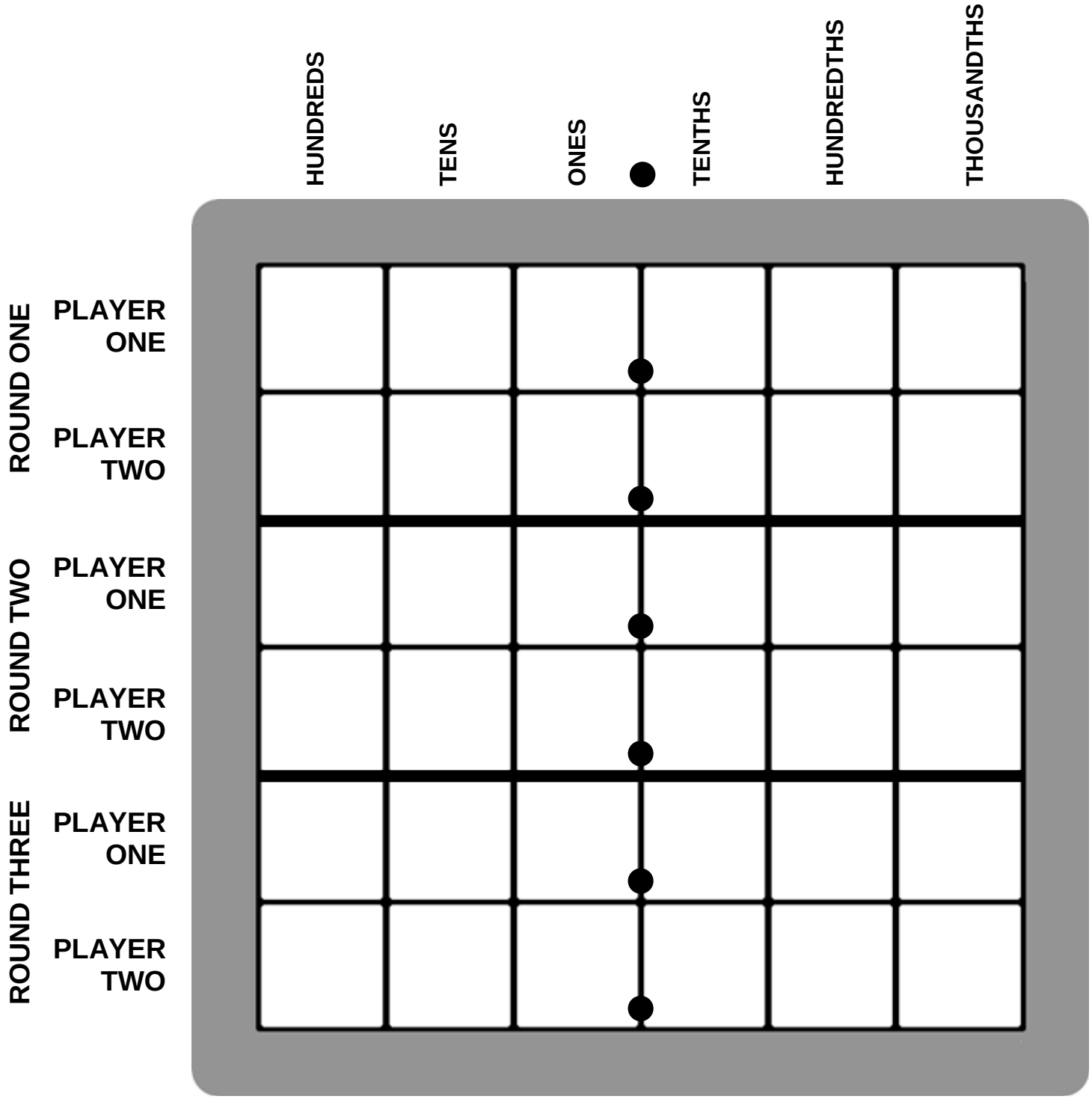
Ordered Least _____ _____ _____ _____ _____ _____ _____ Greatest

SHAKE THREE

Numerator							
Denominator							
Equivalent Fractions							

Ordered Least _____ _____ _____ _____ _____ _____ _____ Greatest

Roll On Place Value - Decimals



The goal of the game is to create the largest number. Players take turns rolling a die, placing it into the tray and announcing it's place value for that roll. After 6 rolls, players compare numbers. A point is earned by the player with the largest number.

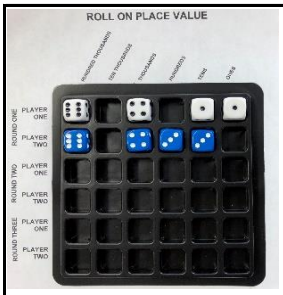
Roll On Place Value

Follow Up Questions

Players _____ Date _____ Grade(s)_____

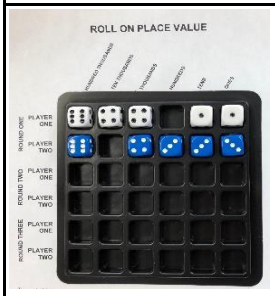
What Version did you play?_____ (up to 1000s or 100,000s or decimal etc)

What did you think of when figuring out where to place each die (ie what was your strategy)?



With two rolls left, which player do you think
has the best chance of winning the game AND why do you think that?

What would have to happen for the other player to win?



With just one roll left, which player do you think
has the best chance of winning the game AND why do you think that?

What would have to happen for the other player to win?

Player One's Number	> = <	Player Two's Number

FRACTION CENTS

LEVEL: Grade 6 and up

SKILLS: Converting fractions to equivalent percent or decimal, mental math, division, estimation

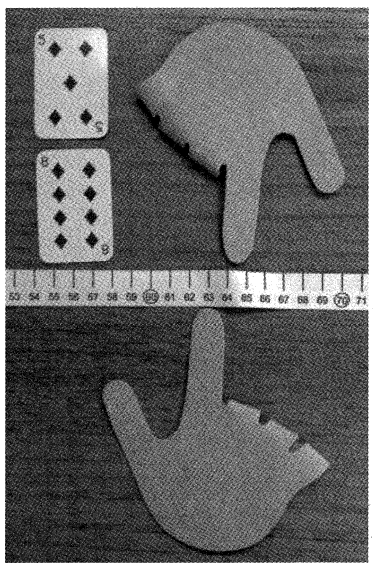
PLAYERS: 2 vs. 2

EQUIPMENT: Cards 1 to 12, Number Line 0-100, fraction/decimal/ percent chart

GETTING STARTED: The goal of the game is to earn points by having the most accurate answer when converting a fraction to its decimal or percent equivalent. Each team begins with a deck of about half the cards in the game. Play begins with each team turning turn over the top card of their deck at the same time. Team members discuss what they think the decimal equivalent for the fraction will be and verbalize their mathematical reasoning (negotiate their team answer). If a team knows the exact answer they can choose to pinch the decimal equivalent on their number line. If they can only estimate the decimal equivalent they may grab with one hand a range on the number line. They check their accuracy by referring to the Fraction /Decimal /Percent chart or by using a calculator to divide the numerator by the denominator. Teams score 3 points if they correctly pinch the decimal equivalent. Teams only score 1 point if the decimal equivalent falls inside the range the range they grabbed if they estimated.

EXAMPLE: Team One turned over a 5 and Team Two turned over an 8. Team One pinched the number line at 63 and said "five eighths of 100% is 63%". Team Two pinched the number line between 62 and 63 and said "five eighths of 100% is somewhere between 62 and 63%. 5 divided by 8 is 0.625 (62.5%). Team One scores zero points, Team Two scores 1 point.

Note: Had Team One grabbed a range and estimated, instead of pinching the number line, they could have earned 1 point.



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