Fraction Race

Skills: Fractions to sixths (proper fractions)
[Can be adapted for improper fractions]

Materials: Dice (2 different colored dice, if possible)

*It is important to provide students with fractional manipulatives as a concrete resource when comparing fractions.

* Multiplication charts make great resources for equivalent fractions and can be used to help simplify fractions.

Multiplication Board

Equivalent Fractions for 1/2

Equivalent Fractions for 3/5

Example One:
We begin at the left with 1 over 2 for 1/2 . As we move to the right we go through the fractions that are equivalent to 1/2 (2/4, 3/6, 4/8 etc.)

Example Two:
We begin on the left by linking 3 over 5 for 3/5. As we move along both rows and continue to link, we get equivalent fractions of 6/10, 9/15, 12/20 etc.

Directions:

1. Students should play in pairs, player 1 & player 2

2. Player 1 rolls 2 dice and uses them to make a proper fraction. Record the rolled fraction on the game board. Simplify the fraction if necessary.

   ❖ **Variation: 2 different colored dice, one represents the numerator and the other represents the denominator. Then simplify the fraction by turning the improper fraction into a mixed number.**

3. Player 2 rolls 2 dice and uses them to make a proper fraction. Record the rolled fraction on the game board. Simplify the fraction if necessary.

4. Then the players compare the 2 fractions and circle the winning fraction. The winner gets a point for the round.

   ❖ **Variations of this game include: Least fraction winner & Greatest fraction winner.**

5. Play 9 rounds and see who won the most! If the round is a tie, both players win a point for that round.

Debrief Activity:

1. If students are having difficulty determining the lesser or greater fraction allow them to use the manipulatives provided.

2. Encourage students to go back and evaluate their fractions.

   • How many fractions did you roll that needed to be simplified?
   • Talk strategy.

Fraction Race proper fraction; greatest wins					Record and circle the greater fraction.	
Round	Player 1	Simplify if necessary	Player 2	Simplify if necessary	Player 1	Player 2
1						
2						
3						
4						
5						
6						
7						
8						
9						
				Point total:		

Fraction Race proper fraction; least wins					Record and circle the least fraction.	
Round	Player 1	Simplify if necessary	Player 2	Simplify if necessary	Player 1	Player 2
1						
2						
3						
4						
5						
6						
7						
8						
9						
				Point total:		

Round	Fraction Race improper fraction; greatest wins				Record and circle the greater fraction.	
	Player 1	Simplify if necessary	Player 2	Simplify if necessary	Player 1	Player 2
1						
2						
3						
4						
5						
6						
7						
8						
9						
				Point total:		

Fraction Race improper fraction; least wins					Record and circle the least fraction.	
Round	Player 1	Simplify if necessary	Player 2	Simplify if necessary	Player 1	Player 2
1						
2						
3						
4						
5						
6						
7						
8						
9						
				Point total:		

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Round	Player 1	Player 2	Player 1	Player 2
1				
2				
3				
4				
5				
6				
7				
8				
9				
		Point total:		

Fraction Race proper fraction; least wins			Record and circle the greater fraction.	
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1				
2				
3				
4				
5				
6				
7				
8				
9				
		Point total:		

Fraction Equivalents

Skills: Fractions, equivalent fractions, decimals, percents

Single player or with a partner

Materials: 1-2 dice to make proper fractions or

2 different colored dice to represent numerator and denominator with improper fractions

Directions:

1. Have student roll 1-2 dice and make a proper fraction.
   Have students roll 2 different colored dice to represent numerator and denominator. (potentially improper fractions)

2. Write the rolled fraction and complete the columns to make simplified fraction (if necessary), an equivalent fraction, and an equivalent decimal.

- Provide manipulative supports as needed.

Fraction Equivalents

Roll	My fraction	My Simplified Fraction (if necessary)	Equivalent Fraction	Decimal Equivalent
1				
2				
3				
4				
5				
6				
7				
8				
9				

Creating Equations

Skills: Addition, Subtraction, Multiplication, Division, Order of Operations

Materials: Multiple dice (or single die used multiple times)

Target Number		+		=	
Player 1					
Player 2					

Directions:

1. To start, a target number is rolled using 2 dice. _____   + _____ = Target Number.

2. Player 1 rolls the die (dice) to fill in his/her section of the game board by drawing the pips or numbers. 18 rolls

Player 2 rolls the die (dice) to fill in his/her section of the game board by drawing the pips or numbers. 18 rolls

3. Each player uses his/her dice to create number sentences to equal the target number.

Each die can only be used once (color in or cross it off the game board once it's used)

4. The players alternate turns, removing the dice as they make combinations and record their math sentences.

5. Play until all possible combinations have been removed from the game board. The player with the least number of dice remaining is the winner.

Debrief Activity:

1. This is a great game for practicing order of operations and preparing students for this type of operational thinking. Some students may benefit from having multiple dice for this activity. This way dice can physically be moved and manipulated to create the number sentences.

2. Encourage students to go back and evaluate their moves. Could they have taken more dice off the board if they played differently?

3. Have students answer the following questions:

- What were the most useful operations and why?
- What were the most useful numbers and why?
- Talk strategy.

Creating Equations

Target Number

| | + | | = | |

Player 1						
Player 2						

My Math Sentences

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.