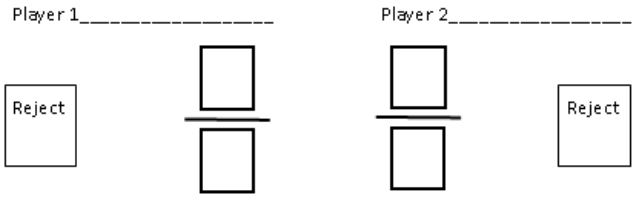
Roll A Fraction

Materials for each pair: One six-sided number cube, a sheet of paper and a pencil

Purpose: To roll the greatest fraction!

Getting ready to roll:

1. Sit next to a partner.
2. Fold a sheet of paper in half the long way.
3. Each player selects one-half of the paper to record their work and writes their name at the top.
4. Draw a fraction with a box for the numerator, a box for the denominator and a reject box for each player.



Start Rolling! Remember to try to build the greatest fraction.

1. Take turns rolling a die and placing the rolled number in a box on your side of the recording sheet.
2. For each roll you must decide whether to put the number in the numerator, denominator or the reject box.
3. Once you place a number in a box you may not change your mind.
4. Once the boxes are filled, decide which player built the greatest fraction.
5. Explain in words, pictures, or number line drawing how you decided which fraction was larger.
6. Draw the correct symbol to show which fraction is greater.

   Greater than (>) Less than (<) Equal (=)
7. Play the game several times. What do you notice?
8. Write about your strategy for getting the greatest fraction.
   - What is the best roll?
   - What number should go in the reject box?
   - What should you do when you roll a big number?

Play the game again to see if your strategy works!

Source: This activity has been adapted from "The Comparing Game" Marilyn Burns' Teaching Arithmetic: Lessons for Extending Fractions, Grade 5 (Math Solutions Publications, 2003), pp. 56–63, 145–52.

The Fraction Kits below can be used by students to shade and then compare fractions rolled in their game.

Fraction kit for using regular dice:

1 whole unit					
1/2			1/2		
1/3		1/3		1/3	
1/4		1/4		1/4	1/4
1/5	1/5		1/5	1/5	1/5
1/6	1/6	1/6	1/6	1/6	1/6

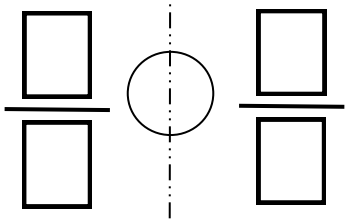
Fraction Kit for 3rd grade version of the game using only 1, 2, 3, 4, 6, 8 as denominators:

1 whole unit							
1/2				½			
1/3			1/3			1/3	
1/4		1/4		1/4		1/4	
1/6	1/6		1/6	1/6		1/6	
1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8

Player 1_____

Player 2_____

Reject



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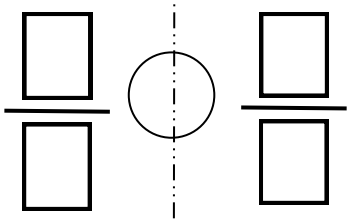

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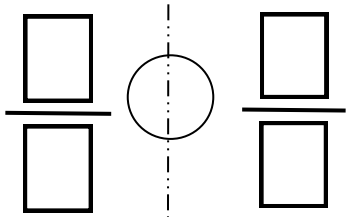

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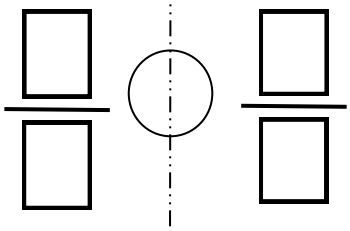

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