

Relating Fractions and Decimal Numbers

Match-Three

Materials

- sets of cards (duplicated from the attached copy and cut out) – 1 set per pair of students

Activity

Divide the students into groups of 2. Provide each group with a set of cards.

To play the game, each student is dealt six cards. The rest of the cards are placed face down in a pile between the players.

The goal is to get three matching cards (cards that show the same number of tenths). Players take turns drawing the top card from the pile and discarding one card from their hand. Students should name the discarded card, then place it face down under the pile.

The first player to get three matching cards showing three different representations wins the game. The winning player should name the cards and then reveal them to the other player for verification.

Extensions

Increase the length of the game by asking the players to get rid of all their cards instead of letting the first match win.

Ask that the winning player get four matches instead of three (four different representations).

Play “Fish.” Players must ask each other for representations (“Do you have any cards showing three tenths?”).

Have the students make up their own rules for the deck of cards or adapt other card games they know how to play.

Use or remove the 0 and 1 cards from the deck.

Assess the students as they name their cards.

Relating Fractions and Decimal Numbers

Fractions or Decimals, Heads or Tails

Materials

- paper and pencil for students
- coin

Activity

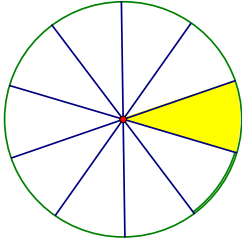

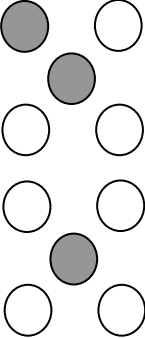
Read a decimal number to the students (e.g., four and six tenths). Students record the number either as a fraction ($4 \frac{6}{10}$) or as a decimal number (4.6).

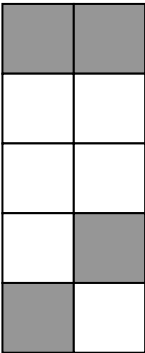

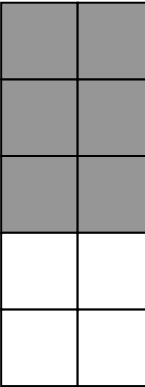
Next, toss a coin. If the coin lands *heads* up, students who recorded the number as a decimal number receive a point. If the coin lands *tails* up, students who recorded the number as a fraction receive a point.

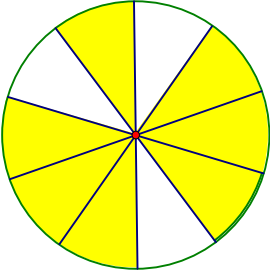
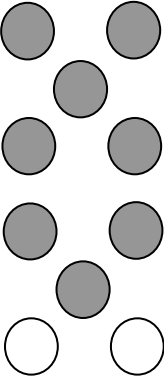
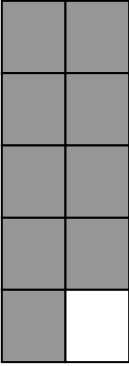
Continue to read out other numbers and have students record them as fractions or decimal numbers. Have them keep a tally of points they receive based on the tosses of the coin.

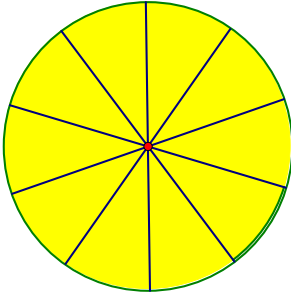
The first student(s) to receive 10 points win(s) the game.

Match-Three Cards

0.1	$\frac{1}{10}$		one tenth
0.2	$\frac{2}{10}$		two tenths
0.3	$\frac{3}{10}$		three tenths

0.4	$\frac{4}{10}$		four tenths
0.5	$\frac{5}{10}$		five tenths
0.6	$\frac{6}{10}$		six tenths

0.7	$\frac{7}{10}$		seven tenths
0.8	$\frac{8}{10}$		eight tenths
0.9	$\frac{9}{10}$		nine tenths

0.0	$\frac{0}{10}$		zero tenths
1.0	$\frac{10}{10}$		ten tenths
0	1	zero	one