# FRACTION and DECIMAL CARD GAME – TEACHER NOTES

# Opener – 10 – 15 mins

“Any fraction can be turned into a decimal. It’s quite easy. Simply divide the ***numerator*** (the top number) by the ***denominator*** (the bottom number). If you use a calculator, it’s even easier.”

 For example, suppose you wanted to change the fraction ¾ into a decimal. Here’s what you

 would do. Write this on the board:

 *PRESS* *SEE*

 **3 ÷ 4 = 0.75**

 **¾ is exactly the same as 0.75**

Sometimes it’s difficult to tell if one fraction is larger than another. If you change the fractions to decimals, it’s easier to compare them.

* Play a little game with the class. Hold up the fraction flash cards in turn.
* The class has to decide which fraction in each pair is larger by voting. Then ask the group to check by changing each fraction to a decimal using the calculator (as shown above).

Flash cards are:

**4 2 5 7 3 8 9 3**

**7 3 8 12 4 11 16 5**

Write this on the board: 0.1111111

Ask someone to read out what the decimal number is.

* The class has to work out what fraction this is equivalent to using trial and error on their calculators. Tell them that if they get it quickly they must keep it a secret from the others.
* Allow about 5 minutes for the group to attempt this.
* Before telling the class what the answer is, go through and discuss other fractions they should know by now.

“What does ½ look like as a decimal? Is this decimal bigger or smaller than a half?

What about a ¼? Is 0.1111111 bigger or smaller than a quarter?

What is a tenth as a decimal? Bigger or smaller?”

Etc…

Ultimately the discussion should head towards the answer of one ninth.

The class should now be ready to play the **Fraction Card Game**:

# Main – 25 mins

* The group need to be in fours
* They will each need a set of digit cards 1 – 10
* They will also need a calculator to check the fractions
* A fraction game ‘rules’ sheet

Here are some variations on the game you might like to try.

Play the smallest fraction game. Play the same way, but instead of making the biggest fraction, see which player can make the smallest.

Play the improper fraction game. Instead of making the biggest or smallest fraction, see who can make the largest improper fraction.

# Plenary - 5 mins

A chance to discuss who won in each group. Was it was because they were lucky or did they make lots of winning fractions? How? What made a good fraction to win with? The numbers closest to each other?