

FRACTION EQUIVALENTS

NAME: _____

DATE: _____

Goal: to explore the relationship between fractions and decimals

Organization: Groups of 2 to 4

Materials: calculator, pencil

Instructions:

a. use your calculator to find the decimal equivalents for the following set of fractions: (record them in the table that follows)

$$\begin{array}{l} \frac{1}{1}, \frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{5}, \frac{1}{6}, \frac{1}{7}, \frac{1}{8}, \frac{1}{9}, \frac{1}{10} \\ \frac{2}{2}, \frac{2}{3}, \frac{2}{4}, \frac{2}{5}, \frac{2}{6}, \frac{2}{7}, \frac{2}{8}, \frac{2}{9}, \frac{2}{10} \\ \frac{3}{3}, \frac{3}{4}, \frac{3}{5}, \frac{3}{6}, \frac{3}{7}, \frac{3}{8}, \frac{3}{9}, \frac{3}{10} \\ \frac{4}{4}, \frac{4}{5}, \frac{4}{6}, \frac{4}{7}, \frac{4}{8}, \frac{4}{9}, \frac{4}{10} \\ \frac{5}{5}, \frac{5}{6}, \frac{5}{7}, \frac{5}{8}, \frac{5}{9}, \frac{5}{10} \\ \frac{6}{6}, \frac{6}{7}, \frac{6}{8}, \frac{6}{9}, \frac{6}{10} \\ \frac{7}{7}, \frac{7}{8}, \frac{7}{9}, \frac{7}{10} \\ \frac{8}{8}, \frac{8}{9}, \frac{8}{10} \\ \frac{9}{9}, \frac{9}{10} \end{array}$$

b. What patterns do you see? Which decimals terminate? Which are repeating? Based on your discoveries, what would be the decimal equivalents for the following numbers?

$$3\frac{1}{2}$$

$$4\frac{2}{3}$$

$$7\frac{1}{9}$$

$$\frac{5}{3}$$

c. What is it about a fraction that makes it a repeating decimal?

d. Can you find a pattern for numbers out of 11? Out of 99? Describe it.

