

Name: KeyMath 221: Quiz 11 - 6/22/15 (LAST QUIZ!)

Solve the following problems. Please use a pencil if possible.

1. Solve the problem
- $\frac{3}{4} \div \frac{2}{3}$
- using Keep Change Flip with a careful explanation. [50 Points]

① $\frac{3}{4} \div \frac{2}{3} = n$

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

-or-

②
$$\frac{\frac{3}{4}}{\frac{2}{3} \cdot \frac{3}{2}} = \frac{\frac{3}{4} \cdot \frac{3}{2}}{1} = \frac{3}{4} \cdot \frac{3}{2} = \frac{9}{8}$$

-or-

~~$\frac{3}{2} \cdot \frac{2}{3}n = \frac{3}{4} \cdot \frac{3}{2}$~~

$$n = \frac{3}{4} \cdot \frac{3}{2} = \frac{9}{8}$$

③
$$\frac{3}{4} \div \frac{2}{3} \cdot \left(\frac{2}{3} \cdot \frac{3}{2}\right) = \frac{3}{4} \div \cancel{\frac{2}{3}} \cdot \cancel{\frac{2}{3}} \cdot \frac{3}{2} = \frac{3}{4} \cdot \frac{3}{2} = \frac{9}{8}$$

2. Convert
- $\frac{9}{125}$
- to a decimal without using long division. Explain how you know it must be terminating before doing the conversion. [50 Points]

$$\frac{9}{125} = \frac{9}{5^3} \cdot \frac{2^3}{2^3} = \frac{72}{10^3} = \boxed{0.072}$$

↑
only 2's and 5's,
so terminating