

Math 1303 - Math in the Liberal Arts

Quiz #2 - 2008.01.23

Solutions

1. Convert the decimal 12.35 to a fraction.

This one is pretty easy. We simply multiply top and bottom by 100 to move the decimal place over two to the right.

$$12.35 = 12.35 \cdot \frac{100}{100} = \frac{1235}{100} = \frac{247}{20}$$

2. Convert the decimal $1.02\overline{34}$ to a fraction.

$$1.02\overline{34} = 1.02 + 0.00\overline{34} = \frac{102}{100} + 0.00\overline{34}$$

Now we focus on $0.00\overline{34}$. Setting $n = 0.00\overline{34}$, we have

$$100n - n = 0.34\overline{34} - 0.00\overline{34}$$

$$99n = 0.34,$$

so we have $99n = \frac{34}{100}$ or $n = \frac{34}{9900}$. So

$$1.02\overline{34} = \frac{102}{100} + \frac{34}{9900} = \frac{2533}{2475}.$$