


MATH DOESN'T SUCK



Solution Guide – Chapter 12

Converting Decimals to Fractions

Doing the Math from p. 156

2) $0.8 = ?$

Count the **one** digit to the right of the decimal, and so make a denominator with **one** zero, and drop the decimal for the numerator: $\frac{8}{10}$

Next, reduce: $\frac{8 \div 2}{10 \div 2} = \frac{4}{5}$

Answer: $0.8 = \frac{4}{5}$

3) $0.\bar{8} = ?$

Since the 8 repeats with just **one** digit, (and it's the only thing after the decimal point) we use just **one** 9 in the denominator: $\frac{8}{9}$

It's already reduced, so we're done!

Answer: $0.\bar{8} = \frac{8}{9}$

4) $1.5 = ?$

Count the **one** digit to the right of the decimal, and give the denominator **one** zero: $\frac{15}{10}$

Next, reduce: $\frac{15 \div 5}{10 \div 5} = \frac{3}{2}$.

We could also write this as a mixed number: $\frac{3}{2} = 1\frac{1}{2}$

Answer: $1.5 = \frac{3}{2}$ or $1\frac{1}{2}$

5) $1.\bar{5} = ?$

First, we'll separate the decimal part and write this as: $1.\bar{5} = 1 + 0.\bar{5}$

So let's deal with the $0.\bar{5}$ and add it to the 1 later.

Since "all" the numbers after the decimal point repeat (there's only one: 5), we know that

we can put the 5 over a "9": $0.\bar{5} = \frac{5}{9}$. (Since there was only one digit after the decimal

point, we only used one 9 in the denominator.)

So: $1.\bar{5} = 1 + \frac{5}{9}$

Answer: $1.\bar{5} = 1\frac{5}{9}$, or as a mixed number, $\frac{14}{9}$