

January 25, 2016

1.1 #28) $0.\bar{9}$ why is this a fraction?

Convert $0.\bar{9}$ to a fraction

- Let $x = 0.9999\dots$
- $10 \cdot x = 10.09999\dots$
 $\rightarrow 10x = 9.9999\dots$
- $10x = 9.9999\dots$
 $-x = 0.9999\dots$

 $9x = \frac{9}{9}$
 $x = 1$

Jan 25-9:08 AM

1.1 #37

$\mathbb{R} = \{x \mid x \text{ is a Real Number}\}$

Real

Rational Irrational

$5, \frac{4}{3}, -0i$ $-\sqrt{2}, \pi, \sqrt{5}$

Natural $\rightarrow \{1, 2, 3, \dots\}$

#38) e.g. 2
 ↑
 Natural that is not Irrational

Jan 25-9:20 AM

Quiz #1 - Wednesday
 COR 1.1

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Real Numbers

Variables

$5 + 0 = 5$
 ↑ ↑
 Addition Additive Identity

$13 + (-13) = 0$
 ↑ ↑
 Additive Inverse of +13

$x + 2 = 14$
 $0 - 2 - 2$
 $x + 0 = 12$
 ↓ ↓
 $x = 12$

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Absolute Value

* Is the Distance of something from zero.
 and distance is always positive.

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