

Do Now

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

75%

15

-1.99

12.97 $\bar{3}$



Every one of the numbers on this slide is a “rational number”.

Can you write a definition for rational numbers that would include all of these examples?

0.121212...

$$-57\frac{2}{9}$$

$$\frac{17}{2}$$

-1,000,000





Vi Hart

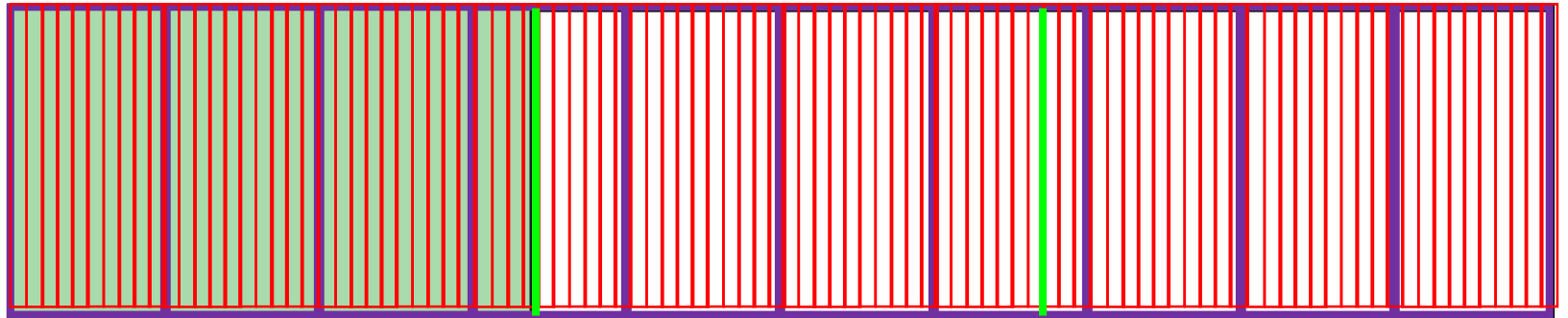
Vi Hart is the most famous mathematician on YouTube.





Let's consider a fraction like $\frac{1}{3}$

What does this fraction look like in standard (decimal) form?



Rational Person

calm, reasonable,
predictable



Irrational Person

wild, unreasonable,
unpredictable



Rational Number

0.171717...

Irrational Number

2.71828182845904523536



Converting Repeating Decimals

NOTES

Convert the following rational numbers to standard form (decimals).

1) $\frac{3}{11}$

2)

$$\frac{5}{8}$$

$$3) \quad \frac{61}{225}$$

Convert the following rational numbers to fraction form.

4) $0.\overline{7}$

What about $0.99999\dots$

$$5) \quad 0.\overline{31}$$

$$6) \quad 0.\overline{18}$$

$$7) \quad 0.\overline{771}$$

$$8) \quad 0.\overline{239}$$

$$9) \quad 0.15\overline{102}$$