



# Square Roots

Today's Learning Targets:

1.3 I can classify a number as rational or irrational.

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Is the square root of a **PERFECT** square a rational or irrational number?

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Is the square root of a **NON-PERFECT** square a rational or irrational number?

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Why?

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## Rational vs. Irrational Numbers

<p><b>Rational:</b> Any number that can be <u>written as a fraction</u>. As a decimal, rational numbers <u>repeat or have a pattern</u>.</p> <p><b>Examples:</b> <math>\frac{1}{2}</math>   <math>.25 = \frac{1}{4}</math>   <math>5 = \frac{5}{1}</math> <math>\sqrt{36} = 6 = \frac{6}{1}</math></p>	<p><b>Irrational:</b> A number that <u>can't be written as a fraction</u>. As a decimal, irrational numbers <u>can't repeat or have a pattern</u>.</p> <p><b>Examples:</b> <math>\sqrt{2}</math>   <math>0.2569874125...</math> <math>\pi = 3.14</math></p>
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## Unit 1-3

### Rational or Irrational?

$$\frac{125}{137} \longrightarrow$$

.6985124437852...  $\longrightarrow$

.25  $\longrightarrow$

.66666666  $\longrightarrow$

$\sqrt{3}$   $\longrightarrow$

.857148571485714...  $\longrightarrow$

I can classify a number as rational or irrational based on its decimal expansion.

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