

Content Standard	<p>MAFS.8.NS <i>The Number System</i></p> <p>MAFS.8.NS.1 <i>Know that there are numbers that are not rational, and approximate them by rational numbers.</i></p> <p>MAFS.8.NS.1.1 Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.</p>	
Assessment Limits	<p>All irrational numbers may be used, excluding e. Only rational numbers with repeating decimal expansions up to thousandths may be used.</p>	
Calculator	No	
Item Types	<p>Equation Editor Matching Item Multiple Choice Multiselect Open Response</p>	
Context	No Context	
Sample Item		Item Type
<p>Select all numbers that are irrational.</p> <p><input type="checkbox"/> $\frac{1}{3}$</p> <p><input type="checkbox"/> $\sqrt{2}$</p> <p><input type="checkbox"/> π</p> <p><input type="checkbox"/> $\frac{2}{9}$</p> <p><input type="checkbox"/> $\sqrt{3}$</p>		Multiselect
<p>Which number is irrational?</p> <p>A. $\sqrt{64}$</p> <p>B. $\frac{1}{2}$</p> <p>C. $\frac{\sqrt{16}}{4}$</p> <p>D. $\frac{\sqrt{20}}{5}$</p>		Multiple Choice
<p>What is $0.\overline{36}$ written as a fraction?</p>		Equation Editor
<p>Why is the square root of a perfect square always rational?</p>		Open Response

Sample Item	Item Type															
<p>Determine whether each number is rational or irrational.</p> <table><tr><td></td><th>Rational</th><th>Irrational</th></tr><tr><td>$\sqrt{81}$</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>$\sqrt{89}$</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>$\sqrt{121}$</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>$\sqrt{131}$</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr></table>		Rational	Irrational	$\sqrt{81}$	<input type="checkbox"/>	<input type="checkbox"/>	$\sqrt{89}$	<input type="checkbox"/>	<input type="checkbox"/>	$\sqrt{121}$	<input type="checkbox"/>	<input type="checkbox"/>	$\sqrt{131}$	<input type="checkbox"/>	<input type="checkbox"/>	Matching Item
	Rational	Irrational														
$\sqrt{81}$	<input type="checkbox"/>	<input type="checkbox"/>														
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