



## Rational Functions and Asymptotes - Degree Top and Bottom to X Asymptote

### Types

<b>1</b> What type of horizontal or slant asymptote does a rational function with these degrees have? <b>Numerator degree: 2</b> <b>Denominator degree: 1</b>		<b>2</b> What type of horizontal or slant asymptote does a rational function with these degrees have? <b>Numerator degree: 1</b> <b>Denominator degree: 3</b>	
<b>A</b> Horizontal asymptote (not at zero)	<b>B</b> No horizontal or slant asymptote	<b>A</b> Horizontal asymptote (at zero)	<b>B</b> Horizontal asymptote (not at zero)
<b>C</b> <b>Slant asymptote</b>	<b>D</b> Horizontal asymptote (at zero)	<b>C</b> No horizontal or slant asymptote	<b>D</b> <b>Slant asymptote</b>
<b>3</b> What type of horizontal or slant asymptote does a rational function with these degrees have? <b>Numerator degree: 3</b> <b>Denominator degree: 2</b>		<b>4</b> What type of horizontal or slant asymptote does a rational function with these degrees have? <b>Numerator degree: 1</b> <b>Denominator degree: 1</b>	
<b>A</b> Horizontal asymptote (not at zero)	<b>B</b> Horizontal asymptote (at zero)	<b>A</b> No horizontal or slant asymptote	<b>B</b> Horizontal asymptote (not at zero)
<b>C</b> <b>Slant asymptote</b>	<b>D</b> No horizontal or slant asymptote	<b>C</b> <b>Slant asymptote</b>	<b>D</b> Horizontal asymptote (at zero)
<b>5</b> What type of horizontal or slant asymptote does a rational function with these degrees have? <b>Numerator degree: 1</b> <b>Denominator degree: 2</b>		<b>6</b> What type of horizontal or slant asymptote does a rational function with these degrees have? <b>Numerator degree: 3</b> <b>Denominator degree: 3</b>	
<b>A</b> Horizontal asymptote (at zero)	<b>B</b> Horizontal asymptote (not at zero)	<b>A</b> Horizontal asymptote (not at zero)	<b>B</b> Horizontal asymptote (at zero)
<b>C</b> No horizontal or slant asymptote	<b>D</b> <b>Slant asymptote</b>	<b>C</b> No horizontal or slant asymptote	<b>D</b> <b>Slant asymptote</b>
<b>7</b> What type of horizontal or slant asymptote does a rational function with these degrees have? <b>Numerator degree: 2</b> <b>Denominator degree: 2</b>		<b>8</b> What type of horizontal or slant asymptote does a rational function with these degrees have? <b>Numerator degree: 2</b> <b>Denominator degree: 3</b>	
<b>A</b> No horizontal or slant asymptote	<b>B</b> <b>Slant asymptote</b>	<b>A</b> Horizontal asymptote (not at zero)	<b>B</b> <b>Slant asymptote</b>
<b>C</b> Horizontal asymptote (not at zero)	<b>D</b> Horizontal asymptote (at zero)	<b>C</b> Horizontal asymptote (at zero)	<b>D</b> No horizontal or slant asymptote