

## Pre-Calc AB Worksheet #59 : Answers

1a. Rational function because it is the quotient of two polynomials.

1b. Rational function because it is a polynomial.

1c. Rational function because it is a polynomial.

1d. Not rational because the numerator is not a polynomial.

Holes	None	
Zeros	2	-5
Multiplicities	1	1
V. A.	$x = 3$ and $x = -1$	
Y-intercept	$(0, \frac{20}{3})$	

2a.

Holes	$(-1, \frac{3}{2})$
Zeros	2
Multiplicities	1
V. A.	$x = 3$
Y-intercept	$(0, \frac{4}{3})$

2b.

Holes	$(-1, 0)$
Zeros	2
Multiplicities	1
V. A.	$x = 3$
Y-intercept	$(0, 0)$

2c.

Holes	None
Zeros	2
Multiplicities	1
V. A.	$x = 3$ and $x = -1$
Y-intercept	$(0, \frac{4}{3})$

2d.

3a. None because the degree of the polynomial in the numerator is two greater than the degree of the denominator.

3b.  $y = 2$

3c.  $y = 2x + 4$

3d.  $y = 0$

4. 3