

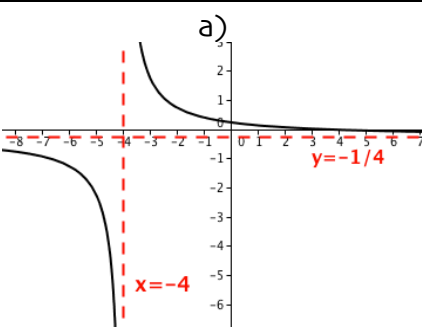
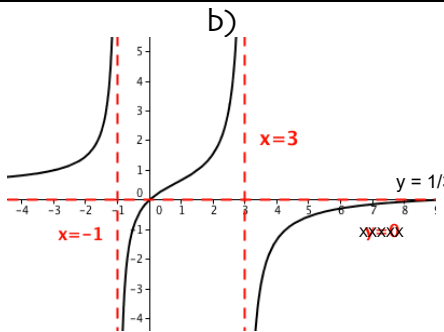
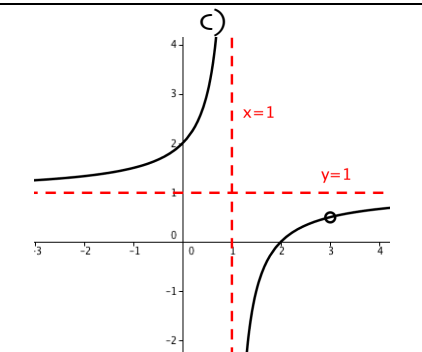
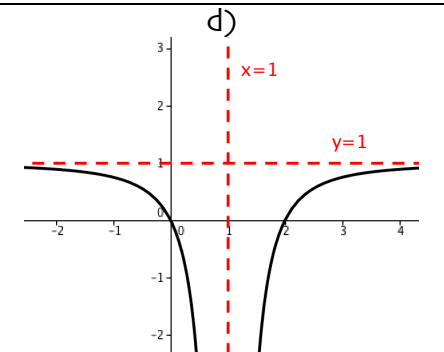
## A2: Sketching Rational Functions - WKST 1

I. For each function find:

- a) X-intercepts    b) Y-intercept    c) Holes    d) Asymptotes

1. $f(x) = \frac{5x}{x+2}$	2. $y = \frac{x^2 - 4}{2x^3 - 8x}$	3. $g(x) = \frac{4}{(x-5)^2}$
4. $f(x) = \frac{x^3 - 4x^2 - 4x + 16}{x^3 - 5x^2 + 4x}$	5. $y = \frac{3}{x^2 + 1}$	

II. Match each function with its graph.

<p>a)</p> 	<p>b)</p> 	<p>6. <math>f(x) = \frac{x-4}{-4x-16}</math></p>
<p>c)</p> 	<p>d)</p> 	<p>7. <math>f(x) = \frac{x^2 - 5x + 6}{x^2 - 4x + 3}</math></p>
		<p>8. <math>f(x) = \frac{x^2 - 2x}{x^2 - 2x + 1}</math></p>
		<p>9. <math>f(x) = \frac{x^2 - 9x}{3x^2 - 6x - 9}</math></p>

## ANSWERS

1.

a) $x = 0$	b) $(0,0)$	c) none	d) HA: $y = 5$ , VA: $x = -2$
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2.

a) none	b) none	c) $\left(2, \frac{1}{4}\right)$ , $\left(-2, -\frac{1}{4}\right)$	d) HA: $y = 0$ , VA: $x = 0$
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3.

a) none	b) $\left(0, \frac{4}{25}\right)$	c) none	d) HA: $y = 0$ , VA: $x = 5$
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4.

a) $x = \pm 2$	b) none	c) $(4,1)$	d) HA: $y = 1$ , VA: $x = 0$ & $x = 1$
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5.

a) none	b) $(0,3)$	c) none	d) HA: $y = 0$ , VA: none
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6. A

7. C

8. D

9. B