

$$f(x) = \frac{x^2}{x-2} \quad \frac{2}{1}$$

$$f(x) = \frac{2x-1}{4x+3}$$

$$4x+3=0$$

$$\frac{4x}{4} = \frac{-3}{4}$$

$$x = -\frac{3}{4}$$

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Algebra II Finding VA, HA, Domain, Range, x-int, y-int.

$$1. f(x) = \frac{x^2-3x}{x+4}$$

V. Asymptote: $x = -4$

$$\frac{x+y=0}{-y=-4}{x=-4}$$

Domain in alg. notation: $x \neq -4$

Domain in int. notation: $(-\infty, -4) \cup (-4, \infty)$

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$$f(x) = \frac{1}{x^2-9}$$

$$(x-3)(x+3) = 0$$

$$x-3=0 \quad x+3=0$$

$$x=3 \quad x=-3$$

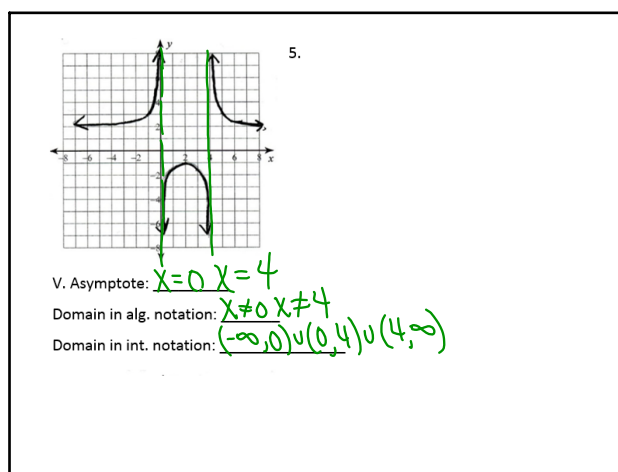
VA: $x = -3 \quad x = 3$

D alg form: $x \neq -3 \quad x \neq 3$

D interval form:

$$(-\infty, -3) \cup (-3, 3) \cup (3, \infty)$$

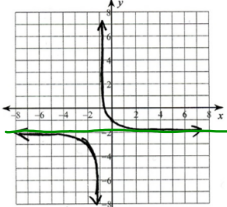
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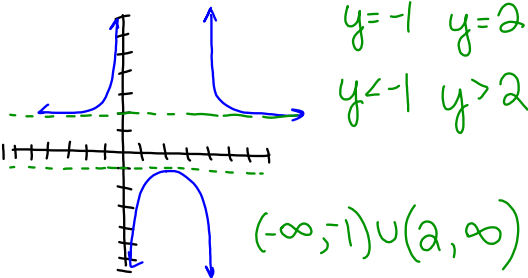
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9. $f(x) = \frac{x+5}{x^2} \cdot \frac{1}{2}$
 H. Asymptote: $y=0$
 $f(x) = \frac{3x^3 + 15x}{8x^3 - 2x^2} \quad \frac{3}{8} \quad y = \frac{3}{8}$

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13.

 H. Asymptote: $y = -2$
 Range in alg. notation: $y \neq -2$
 Range in int. notation: $(-\infty, -2) \cup (-2, \infty)$

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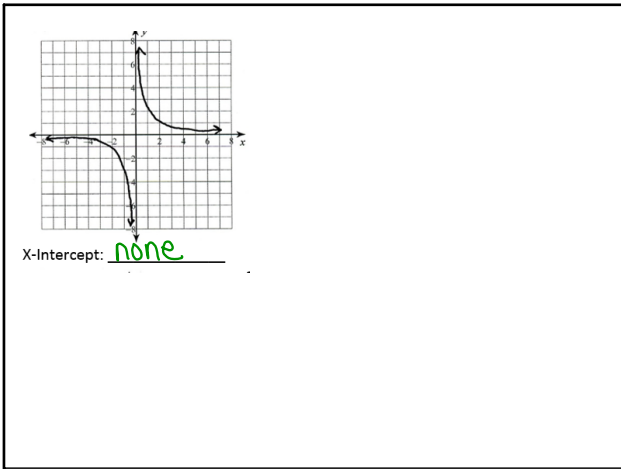


$y = -1 \quad y = 2$
 $y < -1 \quad y > 2$
 $(-\infty, 1) \cup (2, \infty)$

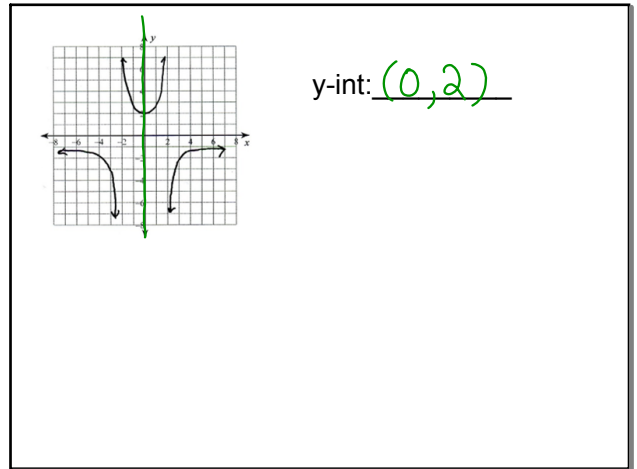
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17. $f(x) = \frac{x-6}{x^2}$
 X-Int: $(6, 0)$
 $x-6 = 0$
 $x = 6$

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