

Starter

Homework Questions

1.2 Symmetry/Asymptotes

HW Pg. 103 #47-66

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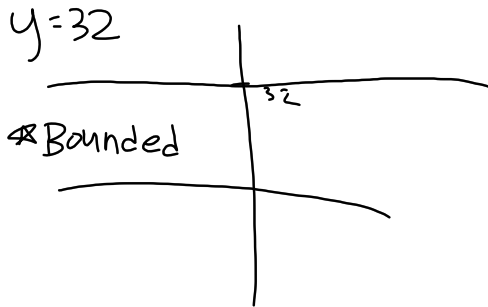
$$43) -x^3 + 2x - 3$$

$$\text{max} (.82, -1.91)$$

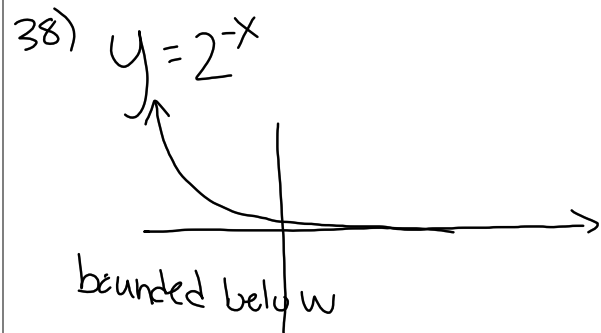
$$\text{min} (-.82, -4.09)$$

$$X \bullet -1.89 (-1.89, 0)$$

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46) $x|2x+5|$

$$x \bullet (-2.5, 0), (0, 0)$$

$$\text{max} \bullet (-2.5, 0)$$

$$\text{min} \bullet (-1.25, -3.13)$$

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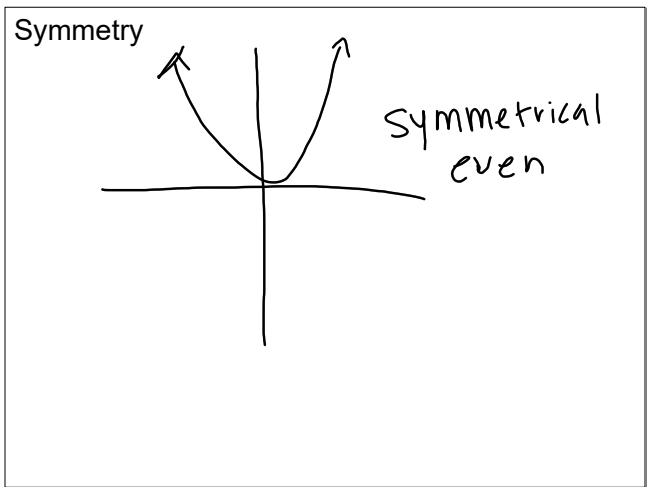
45) $x^2\sqrt{x+4}$

$$x \bullet (0, 0)$$

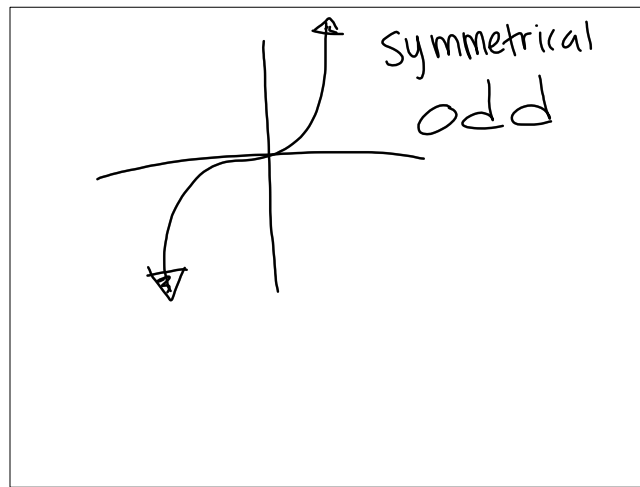
$$\text{max} \bullet (-3.2, 9.16)$$

$$\text{min} \bullet (0, 0)$$

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$f(-x) = f(x)$
 even = same
 a) $x^2 - 3$ $f(-x) = (-x)^2 - 3$
 $= x^2 - 3$
 same = $x^2 - 3$
 even

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b) $g(x) = x^2 - 2x - 2$
 $g(-x) = (-x)^2 - 2(-x) - 2$
 $= x^2 + 2x - 2$
 not same
 neither $g(-x) \neq g(x)$

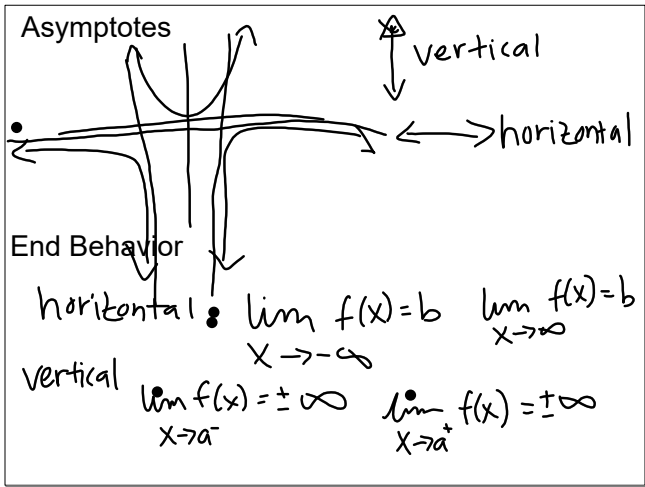
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c) $h(x) = +\frac{x^3}{4-x^2}$ $+ \rightarrow -$
 $(-x) = \frac{(-x)^3}{4-(-x)^2}$ odd
 $= \frac{-x^3}{4-x^2}$ $h(x) + \rightarrow h(x) -$
 $= -\left(\frac{x^3}{4-x^2}\right)$

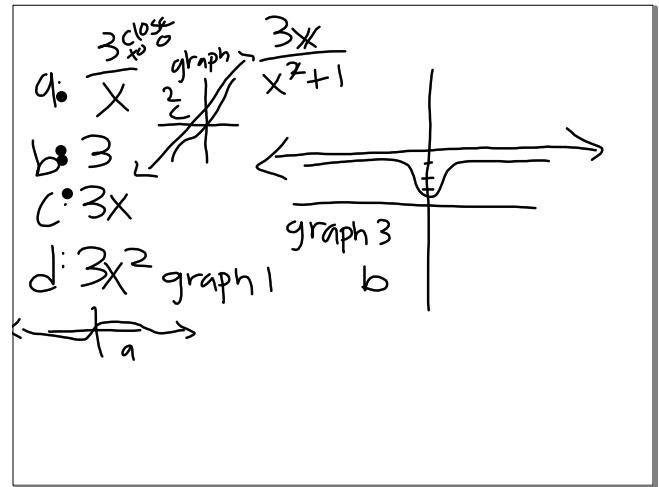
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#63-bb
 end behavior
 horizontal $b = \text{horizontal asymptote}$
 $\lim_{x \rightarrow -\infty} f(x) = b$ $\lim_{x \rightarrow \infty} f(x) = b$
 Vertical $a = \text{vertical asymptote}$
 $\lim_{x \rightarrow a^-} f(x) = +\infty$ $\lim_{x \rightarrow a^+} f(x) = -\infty$

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