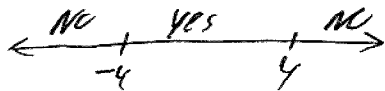


SOLUTIONS

Math 1260 Quiz #8 - June 7, 2006

1. Give the domain for $f(x) = \sqrt{16 - x^2}$.

Need $16 - x^2 \geq 0$. Set $16 - x^2 = 0 \Rightarrow x = 4, -4$



$$[-4, 4]$$

2. Solve for x:

$$25^x = 125^{x-2}$$

$$(5^2)^x = (5^3)^{x-2}$$

$$5^{2x} = 5^{3x-6}$$

$$2x = 3x - 6$$

$$x = 6$$

3. Sketch the graph. Label all x and y intercepts and all horizontal and/or vertical asymptotes.

$$y = \frac{1-2x}{5x+20} = \frac{\frac{1}{x} - 2}{5 + \frac{20}{x}} \text{ so H.A. } y = -\frac{2}{5}$$

V.A at $x = -4$ (set $5x+20=0$)

Set $x=0$, y-intercept $(0, 1/20)$

Set $y=0$, x-intercept $(1/2, 0)$

plug in $x = -4.001$ $y = \frac{+9.002}{-.005}$ large, -

$x = -3.999$ $y = \frac{+8.994}{.005}$ large +

