

Quiz 2

$$f(x) = \frac{x^2 - 7x + 10}{\sqrt{16 - x^2}}$$

#1. Need $16 - x^2 \geq 0$ so $\sqrt{\quad}$ defined
 $16 - x^2 \neq 0$ no division by 0
 $\therefore 16 - x^2 > 0 \Leftrightarrow 16 > x^2 \Leftrightarrow 4 > |x|$
so $-4 < x < 4$ or $(-4, 4) = \text{domain}$

#2 y-int: $x=0 \Rightarrow y = \frac{10}{\sqrt{16}} = \frac{10}{4} = \frac{5}{2}$

x-int $0 = x^2 - 7x + 10 = (x-5)(x-2) = 0$

$\Rightarrow x = 2, 5$, but only 2 in domain, so $\boxed{x\text{-int} = 2}$

#3

