

1. What know about $f(x) = \frac{x}{(1+x)^2}$ (in general)

Answer: $f(x)$ is a rational function. It is continuous except where the denominator is zero. It is undefined where the denominator is zero and has a vertical asymptote at the corresponding x .

2. y-int: set $x=0$, solve for y :

$$y = f(0) = \frac{0}{(1+0)^2} = 0$$

$$\Rightarrow \boxed{\text{y-int } (0,0)}$$

3. x-int: set $y=f(x)=0$ and solve for x .

$$y = 0 = \frac{x}{(1+x)^2} \quad \text{has solutions when the numerator} = 0 \text{ and denominator} \neq 0$$

Solve by setting numerator = 0

$$\Rightarrow \boxed{\text{x-int } (0,0)} \quad \text{(only one x-int)}$$