

Quiz 2 solution

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

Use point-slope form: $y - y_0 = m(x - x_0)$

$$x_0 = 1$$

$$y_0 = f(1) = \frac{1}{1} = 1$$

$$m = f'(1)$$

$$f'(x) = -x^{-2} \text{ (power rule)}$$

$$f'(1) = -(1)^{-2} = -1$$

$$\boxed{y - 1 = -1(x - 1)}$$

2. Use point slope form $y - y_0 = m(x - x_0)$

$$x_0 = 1$$

$$y_0 = 0$$

$$m = 1$$

$$\boxed{y - 0 = 1(x - 1)}$$