

#60

$$y = 1 - x - x^2$$

$$y = -x^2 - x + 1$$

MAX VALUE AT VERTEX

$$x = \frac{-B}{2A} = \frac{-(-1)}{2(-1)} = -\frac{1}{2}$$

$$y = -\left(-\frac{1}{2}\right)^2 - \left(-\frac{1}{2}\right) + 1 = \frac{5}{4}$$

OR

USE CALCULUS

$$y' = -2x - 1$$

WHEN IS  $y' = 0$ ?

$$0 = -2x - 1$$

$$-\frac{1}{2} = x$$