

$g(x) = 3x^2 + 24x - 30$ find the value for x that maximizes $g(x)$

$$g'(x) = 6x + 24$$

$$6x + 24 = 0$$

$$6x = -24$$

$$x = -4$$

$$g(4) = -3 * (4)^2 + 24 * 4 - 30$$

$$g(4) = -48 + 96 - 30$$

$$g(4) = 18$$

$$g(-4) = -3 * (-4)^2 + 24 * (-4) - 30$$

$$g(-4) = -48 - 96 - 30$$

$$g(-4) = -174$$