Exercise 71

Find the equation of the line perpendicular to the line $g(x) = -0.01x + 2.01$ through the point $(1, 2)$.

Solution

The line perpendicular to the given one has the negative reciprocal slope: $m = 1/0.01 = 100$. Use the point-slope formula to get the equation of the line going through $(1, 2)$.

$$y - 2 = 100(x - 1)$$

$$y - 2 = 100x - 100$$

$$y = 100x - 98$$