4. [11 points] Consider the line ℓ given by the equation $y = -3 + 0.2x$.

    a. [3 points] Find the slope and both intercepts of ℓ.

        slope: _____ x**–intercept:** _____ y**–intercept:** _____

    b. [3 points] Find an equation for the line that is perpendicular to the line ℓ (above) and passes through the point $(4, -2)$.

        Answer: $y =$ _____

    c. [5 points] Find an equation for the parabola satisfying *both* of the conditions below.

        • Its y–intercept is 5.

        • Its vertex is the point on the line ℓ (above) where $x = 10$.

        Answer: $y =$ _____