4. [11 points] Consider the line \( \ell \) given by the equation \( y = -3 + 0.2x \).
   a. [3 points] Find the slope and both intercepts of \( \ell \).

   slope: \[ \]  
   \( \)–intercept: \[ \]  
   y–intercept: \[ \]

   b. [3 points] Find an equation for the line that is perpendicular to the line \( \ell \) (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 \( \ell \) (above) where \( x = 10 \).

   Answer: \[ y = \]