7)

- $f(x) = x^2 - y$
  $f'(x) = 2x$

  Newton's iteration
  $f(x) = 0$
  $x_{k+1} = x_k - (x_k^2 - y)/2x_k$

- Initial guess with 4 bit of accuracy, the number of iteration needed to satisfy $4 \times 2^k = m$

  $k = \log_2 24/4$
  $= 3$

  $k = \log_2 53/4$
  $= 4$