1) The length of the diagonal of a square box is 22 inches. Find the dimensions of the box.

2) Given the following function: \( y = x^3 + 2x^2 - 35x \)
   a) Find the x-intercept
   b) Find the y-intercept
   c) Find the zeros of the function

3) If \( f(x) = 2x^2 - 16x + 5 \)
   a) Find \( f(2) \)  
   b) Find \( f(-1) \)  
   c) Find the vertex

4) Find the domain of the following functions:
   a) \( f(x) = \frac{12}{4x + 18} \)  
   b) \( g(x) = \sqrt{6x + 15} \)

5) A 20-ft cable is attached from the top of a pole to the ground 12-ft away from the base of the pole. Find the height of the pole.