Questions

1. How many roots do the following equations have?
   a. $0 = x^2$

   b. $0 = 8x^4 + 5x^3 + x^2 - 14$

   c. $x^3 - x = 5x^5 + x^2$

2. Use the Rule of Descartes to determine how many positive and negative roots each equation has.
   a. $0 = x^3 + 4x^2 - 5x - 3$

   b. $0 = x^2 + 6x + 2$

   c. $0 = x^6 - 5x^5 + 4x^4 - 3x^3 + 2x^2 - x + 6$

3. Sketch the graph of the following equation by first creating a table of values.
   a. $y = 1/2x - 6$

   b. $y = x^2 + 3x - 8$

c. $y=x^3-5x^2+7$

4. Find the roots or the x-intercepts of the following equations by graphing.
   a. $y=x^2-5x-24$

   b. $y=x^3+8x^2+4x-48$