QUIZ 3 - MTH 166 - 10 points

Name:_________________________________________Date:__

Instructions: Solve the following. Remember to show all work in order to receive full credit.

1. Solve the following equations.
   a) \(4x + 2(7 - x) = 5\)
   b) \(16x^2 = 49\)
   c) \(\sqrt{3x - 2} = 4 - x\)
   d) \(x^2 + 6x - 3 = 0\)
   e) \(|x - 3| = 10\)
   f) \(\frac{6}{x} + \frac{8}{x+5} = 10\)

2. Use a graphing utility to solve
   a) \(0 = 12x^3 - 84x^2 + 120x\)
   b) \(0 = \frac{4}{x-3} - \frac{4}{x} - 1\)

3. Solve the inequality either graphically or algebraically.
   a) \(x^2 - 2x \geq 3\)
   b) \(|x - 3| > 4\)
   c) \(|2x + 7| \leq 12\)

4. Perform the operations and write the result in standard form.
   a) \((10 - 3i)(4 + 7i)\)
   b) \((2 - i)(2 + i)\)

5. Solve for any points of intersection using a graphing utility.
   \[
   \begin{cases}
   y = x^3 - 3 \\
   y = 5 - 2x
   \end{cases}
   \]
   • REMEMBER after QUIZ # 4 there will be an exam in the TESTING CENTER
   • EXAM # 2 will include concepts from Quizzes # 3 and # 4