Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Solve the equation $x^5 - 3x^3 - 4x = 0$.

2. Solve the absolute value equation $|x^2 - 3x - 7| = 3$.

3. George is in line to buy tickets for a volleyball game. There are six more people ahead of him in line than behind him. One third of the people in line are behind him.

    (a) Introduce variables, stating their meaning, and write down equations reflecting the data.

    (b) Solve the system of equations to find the number of people that are ahead of George in the line.