Instructions. Do all problems, and show all of your work.

1. Write the complex number \( \frac{3 - 2i}{4 + 3i} \) in standard form.

2. Solve the equation \( 2(x - 3) - 5 = 4(x - 5) \).

3. Solve the equation \( 2|x + 3| + 4 = 34 \).

4. The maximum exercise heart rate = \( .85(220 - a) \) beats per minute where \( a \) the person’s age in years. Write (but do not solve) the equation that could be used to determine the age of a person whose maximum exercise heart rate is 160 beats per minute.