Math 134 Spring 2018
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Homework Quiz 4   Name: _____

Show all your work and simplify your answers unless otherwise specified. If you do not turn in
a rewrite within a week (or after the fifth attempt), your score will be solidified.

1. Solve the following linear equations. Check your answer by plugging it into the original
   equation.

   (a) $3[(x+1) + 2(x-5)] = 2[7x - 2(x-6)]$

   (b) $t + 2(t-1) + 3(t-2) + 4(t-3) + 5(t-4) = 5$

2. List all values that make the denominator zero, and solve the rational equation.

$$\frac{2x}{x-3} = \frac{6}{x-3} + 3$$

3. At Whole Foods, a rotisserie chicken costs $9. At Costco, a rotisserie chicken costs $5, but there is a $60 yearly membership fee. How many rotisserie chickens would you have to buy in one year so that the total price you spend is the same at Whole Foods as it is at Costco (assuming that this is the only item that you buy)?

4. Perform the indicated operation of complex numbers. Write the result in standard form $a + bi$.

   (a) $(5 + 4i)^2 + i(2 - i)$

   (b) $\dfrac{8 - 3i}{i} - (8 - 3i)$