

COT 3100 Recitation #1: Polynomial Review
8/24-28/2020

Problem Solved in Recording

- 1) Compute the sum of all the roots of $(2x + 3)(x - 4) + (2x + 3)(x - 6) = 0$.
- 2) Compute the following product $(3x^3 + 2x - 4)(2x^4 - 5x^2 + x - 6)$.
- 3) The r and s be the roots of the quadratic equation $x^2 + 3x - 6 = 0$. What is the quadratic equation with leading coefficient 1 that has roots $\frac{r}{s}$ and $\frac{s}{r}$?
- 4) If x , y and z are positive real numbers satisfying $x + \frac{1}{y} = 4$, $y + \frac{1}{z} = 1$, and $z + \frac{1}{x} = \frac{7}{3}$, then what is the value of xyz ?

Problems For Recitation (Note: Recitation won't meet this week, but I still picked practice problems. I will post solutions to these before you have to take your corresponding quiz.)

- 1) Compute the sum of all of the roots in the equation $2x^2 - 5x + 7 = 0$.
- 2) Compute the following product $(2x^3 - 7x^2 + 3x - 1)(4x^2 + 2x - 5)$
- 3) The r and s be the roots of the quadratic equation $x^2 + 7x - 11 = 0$. What is the quadratic equation with leading coefficient 1 that has roots r^2 and s^2 ?
- 4) If $x + \frac{1}{x} = 7$, what is $x^3 + \frac{1}{x^3}$?