

2 a) stability = ?

$$P(s) = s^4 + 2s^3 + 3s^2 + 4s + 5$$

two
sign
changes

+	4	1	3	5	
+	3	2	4		
+	2	1	5		
-	1	-6			
+	0	5			

$$b_{n-1} = - \frac{(1.4 - 2.3)}{2} = 1$$

$$b_{n-3} = - \frac{(1.0 - 2.3)}{2} = 5$$

$$c_{n-1} = - \frac{(2.5 - 1.4)}{1} = -6$$

$$d_{n-1} = - \frac{(1.0 - (-6).5)}{(-6)} = 5$$

$P(s)$ Has two roots with real parts, it indicates that the $P(s)$ is unstable.