

MTE 204 – Project 1a Submission Document

Group #16

Name Student 1: Mitchell Catoen ID: 20563284

Name Student 2: Danyon Chu ID: 20563165

Name Student 3: Devon Copeland ID: 20553468

Name Student 4: Ross Duquette ID: 20553972

Name Student 5: David Ferris ID: 20553578

Name Student 6: Justin Lim ID: 20555755

///*****

/// SOLUTIONS TO Problem 1a – 2016

///*****

/// Calculated Forces (N)

FA = 2630.000000, FB = 600.000000

FC = 380.000000, FD = 3550.000000

/// NODAL POSITIONS (mm)

U1x = 0.00000, U1y = 0.00000

U2x = 0.00117, U2y = -0.00235

U3x = 0.00263, U3y = 0.00000

U4x = 0.01183, U4y = -0.00145

/// NODAL FORCES (Newtons)

F1x = -2330.00000, F1y = -2017.77238

F2x = -300.00000, F2y = -519.61524

F3x = -0.00000, F3y = 2537.38762

F4x = 2630.00000, F4y = -0.00000

/// Element Stresses (MPa)

/// ID, Node 1, Node 2, STRESS[MPa]

1, 1, 2, 0.466004 [Tension]

2, 1, 4, 0.931988 [Tension]

3, 2, 4, 0.207861 [Tension]

4, 2, 3, 0.586004 [Tension]

5, 3, 4, 1.171972 [Compression]