```matlab
% Initializes the points for A, B, C, and D as they were given in the
% problem.
pt_A = [6,2,1];
pt_B = [4,0,1];
pt_C = [0,2,3];
pt_D = [0,-1,5];
% Initializes the force given in the problem.
F = 200;

% Using the points, calculates the vectors for AB, AC, and AD.
r_AB = (pt_B-pt_A);
r_AC = (pt_C-pt_A);
r_AD = (pt_D-pt_A);

% Using the vectors, calculates the unit vectors.
e_AB = (r_AB/norm(r_AB));
e_AC = (r_AC/norm(r_AC));
e_AD = (r_AD/norm(r_AD));
% Takes the unit vectors, and calculates the sum of all of them.
e_Sum = e_AB + e_AC + e_AD;

% Takes the force and the the sum of the units vectors in order to
% calculate what the tensions need to be for the bars.
T = F/norm(e_Sum);
% The components of F are calculated.
norm(e_Sum);
Fcomps = -T * e_Sum;

% The results are printed.
fprintf("The X component of F is %.3f kN.\nThe Y component of F is %.3f kN.\nThe Z
component of F is %.3f kN.\n", Fcomps(1), Fcomps(2), Fcomps(3))
```