Quiz 2B
Assignment 2

Marked questions: Make sure to show all your work and explain your for each question/justification for each question. Use only the techniques discussed during class.

1. Consider three forces
    a. $\vec{F}_1$ has a magnitude of 1N and points right
    b. $\vec{F}_2$ has a magnitude of 2 N and points left.
    c. $\vec{F}_3$ has a magnitude of 3N and points right.

    Draw these vectors and calculate $F_1 - 2F_2 + 3F_3$. Also draw $F_1 - 2F_2 + 3F_3$. Make sure that these vectors are scaled correctly. **(2 marks)**

2. You horizontally push on a 2.0kg crate with a force of 9.0 N, causing it to slide with an acceleration of 4.0 m/s^2. What is the coefficient of kinetic friction of the surface? **(2 marks)**

3. Rank the labelled tensions T_A, T_B, T_C (the top part of the ropes) in order from smallest to largest or indicate which tensions are equal to each other. Assume the pulleys and ropes connecting the masses are massless. The masses are indicated with the M or 2M. None of the surfaces can move. **(2 marks)**

