1. Suppose that the velocity of an object along a straight line is \( v(t) = t^3 - 4t^2 + 3t \) m/s on the interval \( 0 \leq t \leq 4 \).
   (a) Determine when the object is moving forwards and when it is moving backwards during \([0, 4]\).
   (b) Determine the displacement (net distance travelled) on the interval \([0, 4]\).
   (c) Determine the \( v_{\text{ave}} \) on the interval \([0, 4]\).
   (d) Determine the TOTAL distance travelled on the interval \([0, 3]\). (NOT \([0, 4]\).)

2. Page 408 #30.

3. Page 408 #32.

4. Page 408 #42. Do part (b) first, then part (a).

5. Page 410 #60(a,b). Time is measured in minutes.