

1. (a) Eq. 11-6 leads to

$$\omega = \frac{d}{dt} (at + bt^3 - ct^4) = a + 3bt^2 - 4ct^3 .$$

- (b) And Eq. 11-8 gives

$$\alpha = \frac{d}{dt} (a + 3bt^2 - 4ct^3) = 6bt - 12ct^2 .$$