

## ECE370 POWER & ENERGY SYSTEMS

### Hints & Answers for HW # 1

1.1 (c)  $1\angle 90 = j$  (e)  $12\angle 90 = j12$

1.2 (a) 500 rpm

1.3 (a) 254.7 kVAR (b) Almost unity pf

For part (b) note that motor hp refers to the *OUTPUT* power and has to be DIVIDED by efficiency to get *INPUT* power. This has to be multiplied by 746 to convert hp to watts.