Phys 1053: Distance Modulus Problems **Name:**

(Show your work!)

The Sun has an absolute magnitude of 4.82. At a distance of 1 AU, its apparent magnitude is -26.

1. If the Sun were at a distance of 10 parsecs (pc), what would its apparent magnitude be?

2. If the apparent magnitude of the Sun was 1.7, how far away would it be? *(Follow the example in the online lecture notes in "Brightness Units".)*

3. If the Sun were at a distance of 200 light years (ly), what would its apparent magnitude be? *(Remember to convert ly to pc before using it in the distance modulus formula.)*