PROBLEM:

Evaluate the following and give the answer in both rectangular and polar form. In all cases, assume that the complex numbers are $z_1 = -3 - j\sqrt{3}$ and $z_2 = 3e^{j\pi/6}$.

(a) Conjugate: z_1^*
(b) jz_2
(c) z_2/z_1
(d) z_2^2
(e) $z_1^{-1} = 1/z_1$
(f) $z_1 z_1^*$
(g) $z_1 + z_2^*$
(h) z_1/z_2
(i) $z_1 z_2$

Note: z^* means the "conjugate" of z.