PROBLEM:

Evaluate the following and give the answer in both rectangular and polar form. In all cases, assume that the complex numbers are $z_1 = 2 - j2$ and $z_2 = 3e^{j3\pi/4}$.

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

Note: z^* means the "conjugate" of z. Part (h) is the *magnitude-squared*.