

Complex numbers

1. If $z_1 = 3 + 8i$ and $z_2 = -2 - 4i$ what are
 - a. $z_1 + z_2$?
 - b. $z_1 z_2$?
 - c. $z_2 z_1$?
 - d. z_1 / z_2 ?
 - e. z_2 / z_1 ?
2. Solve the equation $z^2 + 2z + 5 = 0$
3. Solve the equation $z^2 - (2-3i)z + 10 + 24i = 0$