Unit 7.3 Multiplying and Dividing Complex Numbers in Rectangular Format

1. Multiply the following complex numbers

   a. $(2 + 2i) \cdot (3 + 3i)$

   b. $(5 + 0i) \cdot (2 - 6i)$

   c. $(3 - 5.67i) \cdot (3.45 + 2.1i)$

   d. $(\theta + \beta i) \cdot (\theta + \beta i)$

   e. $(-2 + 6i) \cdot (-3 - 6i)$

   f. $\left(\sqrt{-7}\right) \cdot \left(\sqrt{-7}\right)$

   g. $\left(\sqrt{-3}\right) \cdot \left(\sqrt{10}\right)$

2. Divide the following complex numbers

a. $\left(\sqrt{-27}\right) \div \left(\sqrt{-3}\right)$

b. $(2 + 3i) \div (3 + 4i)$

c. $(5 - 6i) \div (7 + 5i)$

d. $(1) \div (1 + i)$

e. $(3i) \div (2 + 3i)$

f. $(R + (mw)i) \div (R - (mw)i)$

g. $(a + bi) \div (a - bi)$