

## HW-11

### Multiple Choice

Identify the choice that best completes the statement or answers the question.

For the following questions assume that all variables in radicands are non-negative numbers.

\_\_\_\_\_ 1. Simplify.

$$\sqrt{-242m^3n^2}$$

- a.  $11mn\sqrt{2mi}$
- b.  $12mn\sqrt{2mi}$
- c.  $-11mn\sqrt{2m}$
- d.  $-12mn\sqrt{2m}$
- e. None of these

\_\_\_\_\_ 2. Simplify.

$$\sqrt{-60pq} \sqrt{-45pq}$$

- a.  $30\sqrt{3pq}$
- b.  $-30\sqrt{3pq}$
- c.  $30\sqrt{3pqi}$
- d.  $-30\sqrt{3pqi}$
- e. None of these

For the following expressions perform the indicated operations and simplify. Write the answers in  $a + bi$  form.

\_\_\_\_\_ 3.  $(-1 - 8i) + (7 - 9i)$

- a.  $-6 + 17i$
- b.  $15 - i$
- c.  $-15 + i$
- d.  $6 - 17i$
- e. None of these

\_\_\_\_\_ 4.  $(5 - 6i)(7 + 8i)$

- a.  $-13 - 2i$
- b.  $83 - 2i$
- c.  $-13 + 2i$
- d.  $83 + 2i$
- e. None of these

Solve the following equations.

\_\_\_\_\_ 5.  $7m^2 - 448 = 0$

- a.  $m = 6, m = -6$
- b.  $m = 8i, m = -8i$
- c.  $m = 6i, m = -6i$
- d.  $m = 8, m = -8$
- e. None of these

\_\_\_\_\_ 6.  $t^2 + 450 = 0$

- a.  $t = 45\sqrt{2}, t = -45\sqrt{2}$
- b.  $t = 15\sqrt{2}, t = -15\sqrt{2}$
- c.  $t = 15\sqrt{2}i, t = -15\sqrt{2}i$
- d.  $t = 45\sqrt{2}i, t = -45\sqrt{2}i$
- e. None of these

\_\_\_\_\_ 7.  $\frac{1}{2}z^2 = -324$

- a.  $z = 81i, z = -81i$
- b.  $z = 18\sqrt{2}i, z = -18\sqrt{2}i$
- c.  $z = 36\sqrt{2}, z = -36\sqrt{2}$
- d.  $z = 18\sqrt{2}, z = -18\sqrt{2}$
- e. None of these

\_\_\_\_\_ 8.  $x^2 + 15x + 26 = 0$

- a.  $x = 2, x = 13$
- b.  $x = 2, x = -13$
- c.  $x = -2, x = 13$
- d.  $x = -2, x = -13$
- e. None of these

\_\_\_\_\_ 9.  $6m^2 + 121 = -66m$

- a.  $m = \pm 2$
- b.  $m = \pm 11$
- c.  $m = \pm \frac{2}{11}$
- d.  $m = \pm \frac{11}{2}$
- e. None of these