The Complex Number System

1. Write each expression as a pure imaginary number.
(similar to p.537 #26)

$$\sqrt{-16}$$

2. Write each expression as a pure imaginary number.
(similar to p.537 #32)

$$\sqrt{-40}$$

3. Write each expression as a complex number in standard form.
(similar to p.537 #40)

$$\frac{6-\sqrt{-9}}{3}$$

4. Write each expression as a complex number in standard form.
(similar to p.537 #42)

$$\frac{8-\sqrt{-12}}{2}$$

5. Add or subtract as indicated.
(similar to p.537 #46)

$$(-2+5i)-(7-2i)$$

6. Add or subtract as indicated.
(similar to p.537 #50)

$$\left(-3+\sqrt{-32}\right)-\left(-4+\sqrt{-18}\right)$$

7. Multiply.
(similar to p.537 #52)

$$4i(-3+2i)$$

8. Multiply.
(similar to p.537 #58)

$$(3+4i)(7-i)$$

9. Multiply.
(similar to p.537 #68)

$$(3+2i)^2$$

10. Multiply.
(similar to p.538 #72)

$$\sqrt{-18}\cdot\sqrt{-12}$$

11. Divide.
(similar to p.538 #82)

$$\frac{5+2i}{3i}$$

12. Divide.
(similar to p.538 #88)

$$\frac{2}{-3+4i}$$

13. Divide.
(similar to p.538 #94)

$$\frac{2-3i}{1+5i}$$

14. Simplify.
(similar to p.538 #96)

$$i^{36}$$

15. Simplify.
(similar to p.538 #98)

$$i^{82}$$

16. Simplify.
(similar to p.538 #102)

$$i^{-14}$$