

Assignment

Date _____ Period _____

Simplify.

1) $3 + (5i)(i)$

$$-2$$

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

$$2i$$

5) $(5 - 5i)^2$

$$-50i$$

7) $\frac{-6 + 4i}{4 - 2i}$

$$\frac{-8 + i}{5}$$

9) $\frac{2}{6 - 6i}$

$$\frac{1 + i}{6}$$

11) $\sqrt{-125}$

$$5i\sqrt{5}$$

2) $(-5i) - (4i)$

$$-9i$$

4) $(1 + 2i)(-5 + 5i)$

$$-15 - 5i$$

6) $\frac{5 - 5i}{-2i}$

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

8) $\frac{5 - i}{4 - 2i}$

$$\frac{11 + 3i}{10}$$

10) $\sqrt{32}$

$$4i\sqrt{2}$$

12) $\sqrt{50}$

$$5i\sqrt{2}$$

Solve each equation by taking square roots.

13) $p^2 = 64$

$$8 \text{ or } -8$$

$$p = \pm 8$$

Factor each completely.

15) $a^2 - 3a$

$$a(a-3)$$

17) $5n^2 + 13n - 6$

$$(5n-2)(n+3)$$

Solve each equation by factoring.

19) $n^2 - 6n - 7 = 0$

$$n = 7$$

$$n = -1$$

21) $x^2 - 3x = 0$

$$x = 3$$

$$x = 0$$

23) $3a^2 - 8a - 3 = 0$

$$a = -\frac{1}{3}$$

$$a = 3$$

14) $p^2 + 3 = -9$

$$p = \pm 2i\sqrt{3}$$

16) $7k^2 - 30k + 8$

$$(7k-2)(k-4)$$

18) $5m^2 - 21m + 4$

$$(5m-1)(m-4)$$

20) $m^2 - 4m - 32 = 0$

$$m = -4$$

$$m = 8$$

22) $3n^2 - n - 10 = 0$

$$n = -\frac{5}{3}$$

$$n = 2$$

24) $5n^2 + 7n - 6 = 0$

$$n = \frac{3}{5}$$

$$n = -2$$