Math II Honors
Unit 2 day 3: Complex Numbers

Name_____
Period_____Date_____

Simplify:

1. $\sqrt{-25}$	2. $\sqrt{-144}$	3. $\sqrt{-56}$
4. $12 - \sqrt{-225}$	5. $-48 - \sqrt{-256}$	6. i^{18}
7. i^{45}	8. i^{84}	9. $(25 + 6i) - (-33 + 14i)$
10. $(26 - 13i) + (42 + 8i)$	11. $(10 + 3i) - (8 - 16i) + (-9 + 13i)$	
12. $6.2i(8 + 24i)$	13. $(7 - 16i) + (13 + 8i) - (22 + 50i)$	
14. $-0.3i(20 - 6i)$	15. $(3 + 5i)(8 - 7i)$	16. $(3 - 5i)(3 + 5i)$
17. $7i(8 - 12i)(8 + 12i)$	18. $(4 + 9i)^2$	19. $i(3 + 2i)^2$

Find the conjugate.

20. $5i$ 21. $-4.2i$ 22. $6 + 7i$ 23. $-8 - 4i$

Simplify completely.

24. $\frac{2}{5i}$	25. $\frac{6-5i}{4i}$
26. $\frac{2-2i}{4-3i}$	27. $\frac{1+2i}{\sqrt{2}+i}$

Solve for x.

28. $-4x^2 = 64$	29. $2x^2 = -64$
30. $2x^2 + 12 = 8$	31. $3x^2 - 8 = -17$

Factor completely.

32. $3m^2 - 11m + 6$	33. $2n^2 - n - 1$
34. $5x^2 - 23x + 12$	35. $5x^2 + 21x - 20$