Name

Class

Date



Complex Numbers

4-8

**Practice**

*Form G*

**Simplify each number by using the imaginary number *i*.**

**1. ** **2. ** **3.** 

**4.  5.  6. **

**Plot each complex number and find its absolute value.**

**7.** −3*i* **8.** 6 − 4*i* **9.** −4 + 8*i*

**Simplify each expression.**

**10.** (−2 + 3*i*) + (5 − 2*i*)

**12.** (4 − 2*i*) − (−1 + 3*i*)

**14.** (4 − 3*i*)(−5 + 4*i*)

**16.** (5 − 3*i*)(5 + 3*i*)

**18.** (4 − *i*)2

**20. **

**22. **

**24.** 3*i*(2 + 2*i*)

**26. **

**11.** (−6 + 7*i*) + (6 − 7*i*)

**13.** (−5 + 3*i*) − (−8 + 2*i*)

**15.** (2 − *i*)(−3 + 6*i*)

**17.** (−1 + 3*i*)2

**19.** (−2*i*)(5*i*)(−*i*)

**21. **

**23. **

**25.** 2(3 − 7*i*) − *i*(−4 + 5*i*)

**27. **

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Name

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Complex Numbers

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**Practice** (continued)

*Form G*

**Write each quotient as a complex number.**

**28. **

**30. **

**29. **

**31. **

**Find the factors of each expression. Check your answer.**

**32.** *x*2 + 36 **33.** 2*x*2 + 8

**34.** 5*x*2 + 5 **35.** *x*2 +

**36.** 16*x*2 + 25 **37.** −4*x*2 − 49

**Find all solutions to each quadratic equation.**

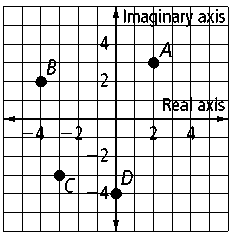
**38.** *x*2 + 2*x +*  5 = 0 **39.** −*x*2 + 2*x −* 10 = 0

**40.** 2*x*2 − 3*x +* 5 = 0

**42.** 3*x*2 + 2*x +* 5 = 0

**41.** −4*x*2 + 6*x −* 3 = 0

**43.** 2*x*2 − 2*x +* 7 = 0



**44. a.** Name the complex number represented by each point on the graph at the right.

**b.** Find the additive inverse of each number.

**c.** Find the complex conjugate of each number.

**d.** Find the absolute value of each number.

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