Name _____ Date _____

LESSON 4.6

Practice A

For use with pages 275–282

DAY 1

Simplify.

1. $\sqrt{-72}$

2. $\sqrt{-24}$

3. $\sqrt{-84}$

4. $\sqrt{-15} \cdot \sqrt{-25}$

5. $\sqrt{-8} \cdot \sqrt{-32}$

6. i^{42}

7. i^{55}

8. i^{89}

Using the properties of exponents, write the complex number in standard form.

9. $2 + i^2$

10. $3 + i^3$

11. $5 - i^4$

12. $2 - i^5$

13. $1 + i^4$

14. $1 + i^8$

15. $1 + i^{12}$

16. $1 + i^{16}$

Solve each equation.

17. $3x^2 + 3 = 0$

18. $x^2 = 2x^2 + 4$

19. $4x^2 + 24 = 0$

20. $(x - 3)^2 = -12$

21. $5x^2 + 125 = 0$

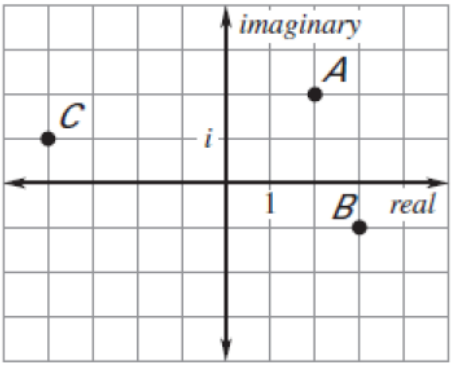
22. $-2(x - 1)^2 = 36$

23. $7x^2 + 84 = 0$

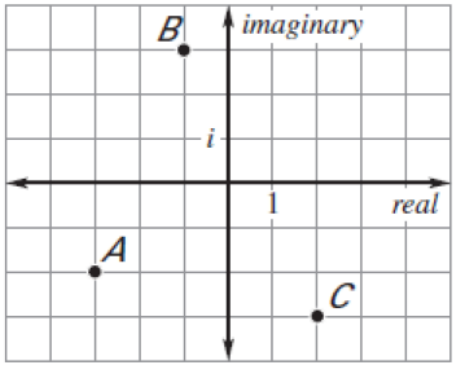
24. $4(x + 2)^2 + 320 = 0$

Identify the complex numbers plotted in the complex plane.

25.



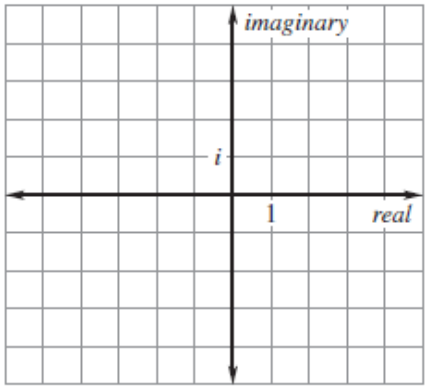
26.



27. $-4i$

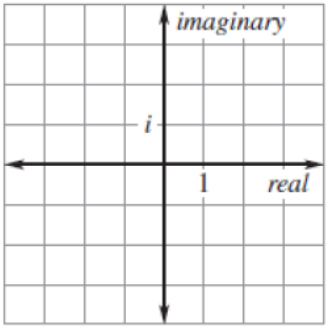
28. $2 + 3i$

29. $-3 + i$

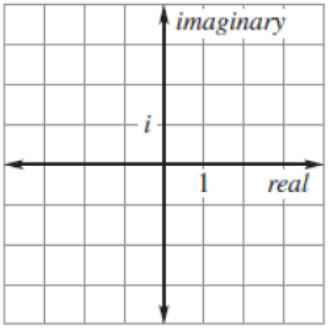
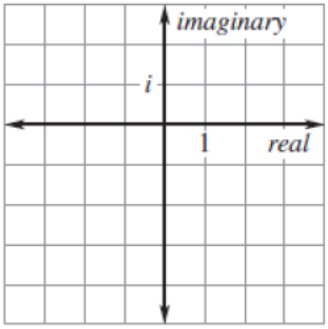


Plot the numbers in a complex plane.

30. $2i$



31. $3 + 3i$



32. $-1 - 4i$