General Algebra II Review Unit 7 page 1 _____

Express each of the following in simplest form.

1. $\sqrt{196} =$

2. $\sqrt[3]{125} =$

3. $\sqrt{-9} =$

4. $\sqrt[3]{-27} =$

5. $\sqrt{80} =$

6. $\sqrt[3]{128} =$

7. $\sqrt{-50} =$

8. $\sqrt[3]{-54} =$

9. $\sqrt{\frac{9}{25}} =$

10. $\sqrt[3]{\frac{1}{27}} =$

11. $\sqrt{\frac{3}{8}} =$

12. $\sqrt[3]{\frac{5}{9}} =$

13. $\sqrt{\frac{-3}{4}} =$

14. $\sqrt[3]{\frac{-3}{4}} =$

General Algebra II Review Unit 7 page 2

Express each of the following in simplest form.

15. $\sqrt{0.25} =$

16. $\sqrt[3]{0.008} =$

17. $\sqrt{0.4} =$

18. $\sqrt[3]{0.4} =$

Perform the indicated operations. Express your answers in simplest form.

19. $\sqrt{24} + \sqrt{54} =$ _____

20. $\sqrt{12} - \sqrt{48} =$ _____

21. $\sqrt[3]{81} + \sqrt[3]{3} =$ _____

22. $\sqrt[3]{2000} - \sqrt[3]{16} =$ _____

23. $\sqrt{\frac{2}{3}} + \sqrt{\frac{1}{6}} =$

24. $\sqrt{\frac{1}{2}} - \sqrt{\frac{2}{9}} =$

25. $\sqrt[3]{\frac{3}{8}} + \sqrt[3]{\frac{1}{9}} =$

26. $\sqrt[3]{\frac{3}{5}} - \sqrt[3]{\frac{25}{9}} =$

General Algebra II Review Unit 7 page 3

Graph each of the following numbers on the complex number plane. Label your graphs properly.

27. -3 + 6i

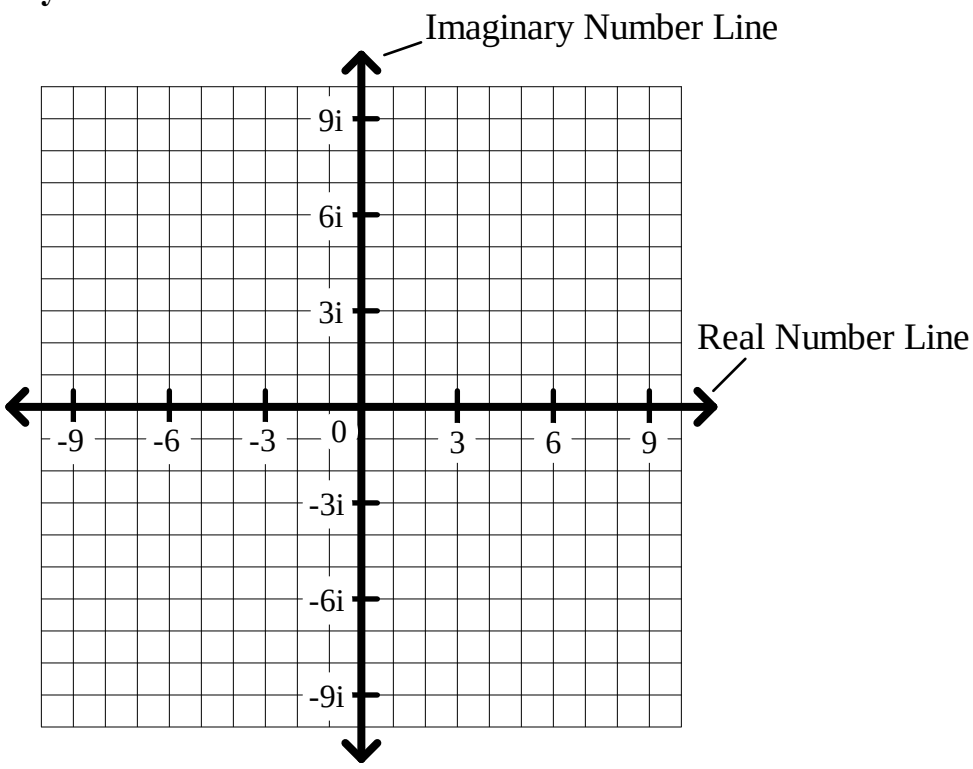
28. -7 – 5i

29. 4 – 8i

30. 5 + 2i

31. 7

32. -5i



Find the indicated absolute values. Express your answers in simplest form.

33. $|-8 + 6i| =$

34. $|2 - 6i| =$

35. $|-5i| =$

36. $|7| =$

Perform the indicated operations.

37. $(3 - 8i) + (6 + 7i) =$ _____

38. $(-5 + 9i) + (2 - i) =$ _____

39. $(6 + 3i) - (9 + 5i) =$ _____

40. $(-2 - 4i) - (5 - 3i) =$ _____

41. $-2(6 - 5i) =$ _____

42. $2i(6 + 3i) =$ _____

General Algebra II Review Unit 7 page 4

Perform the indicated operations.

43. $(5 + 6i)(3 - i) =$ _____

44. $(-2 - 5i)(6 - 3i) =$ _____

45. $(4 + 6i)(2 + i) =$ _____

46. $(9 + 7i)(9 - 7i) =$ _____

47. $(4 - 3i)^2 =$ _____

48. $(3 - i)^3 =$ _____

49. $\frac{4 + 3i}{2i} =$

50. $\frac{2i}{1 + 5i} =$

51. $\frac{8 - i}{1 - 2i} =$

52. $\frac{2 - 3i}{3 + i} =$

Express each of the following in a + bi form.

53. The additive inverse of $3 + 2i$ _____

54. The multiplicative inverse of $3 + 2i$ _____

55. The complex conjugate of $3 + 2i$ _____