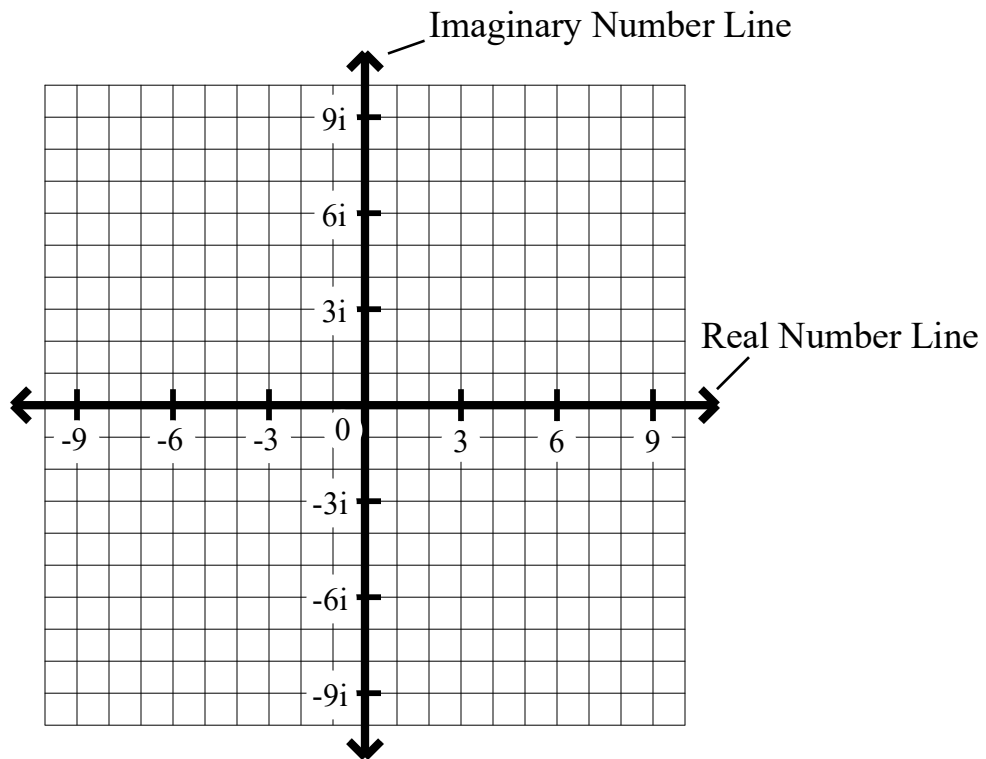


Algebra II Class Worksheet #4 Unit 5 page 1

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

1. $7 + 4i$
2. $-3 + 5i$
3. $-6 - 8i$
4. $9 - 4i$
5. 7
6. $-5i$



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

- | | | |
|-------------------------|------------------------|-----------------------|
| 7. $ 4 + 3i =$ _____ | 8. $ -2 + 3i =$ _____ | 9. $ 3 - 6i =$ _____ |
| 10. $ -1 - 4i =$ _____ | 11. $ -4i =$ _____ | 12. $ 7 =$ _____ |

Find the additive inverse (opposite) of each of the following.

- | | | |
|--------------------|--------------------|--------------------|
| 13. $6 + 8i$ _____ | 14. $3 - 7i$ _____ | 15. $-2 + i$ _____ |
| 16. 9 _____ | 17. $-3i$ _____ | 18. $-1 - i$ _____ |

Perform the indicated operations. Express complex answers in $a + bi$ form.

- | | |
|-----------------------------------|------------------------------------|
| 19. $(3 + 7i) + (5 + 2i) =$ _____ | 20. $(7 - 3i) + (-1 + 3i) =$ _____ |
| 21. $(-3 - 8i) + (4 + i) =$ _____ | 22. $(9 - 7i) + (-3 - 5i) =$ _____ |

Algebra II Class Worksheet #4 Unit 5 page 2

Perform the indicated operations. Express complex answers in $a + bi$ form.

23. $(2 + 8i) - (5 + 3i) =$ _____

24. $(8 + 3i) - (5 + 6i) =$ _____

25. $(5 - i) - (5 - 7i) =$ _____

26. $(4 - 6i) - (-8 + 5i) =$ _____

27. $5(3 + 2i) =$ _____

28. $-3(4 - 7i) =$ _____

29. $2i(2 + 3i) =$ _____

30. $-5i(6 + 4i) =$ _____

31. $(2 + 3i)(5 + i) =$ _____

32. $(3 - 7i)(1 + 4i) =$ _____

33. $(7 - 3i)(2 - 5i) =$ _____

34. $(1 - 8i)(5 + 3i) =$ _____

35. $(8 + 5i)(8 - 5i) =$ _____

36. $(-2 + i)(-2 - i) =$ _____

37. $(6 - 4i)(2 - 3i) =$ _____

38. $(1 - i)(1 + 3i) =$ _____

39. $(2 + 5i)^2 =$ _____

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

41. $(-5 + i)^2 =$ _____

42. $(-3 - 2i)^2 =$ _____

43. $(2 + i)^3 =$ _____

44. $(1 - 2i)^3 =$ _____