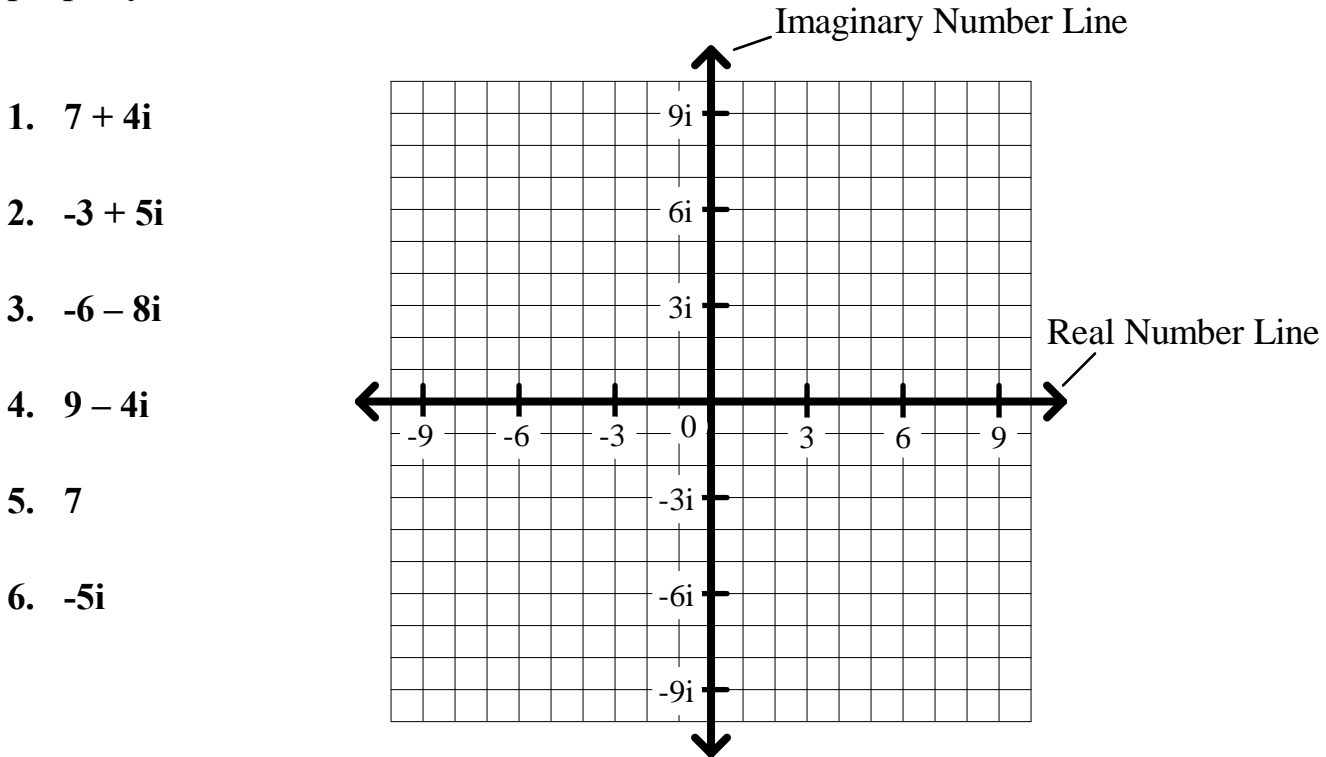


**General Algebra II Class Worksheet #4 Unit 7 page 1** \_\_\_\_\_

**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. $(9 - 7i) + (-3 - 5i) =$ _____ |

## General Algebra II Class Worksheet #4 Unit 7 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.  $(1 - 2i)^3 =$  \_\_\_\_\_