

Name: \_\_\_\_\_

## Imaginary and Complex Numbers

**Exercise 1:** Plot the complex number and find its absolute value.

1)  $z = 3i$

2)  $z = -i$

3)  $z = -7i$

4)  $z = -12$

5)  $z = \frac{1}{2}$

6)  $z = -2\sqrt{2}$

7)  $z = -3 + 7i$

8)  $z = -7 - 7i$

9)  $z = 4 - 9i$

10)  $z = 3 - 2i$

11)  $z = -9 - 5i$

12)  $z = -8 + 5i$

13)  $z = \frac{1}{2} + \frac{1}{3}i$

14)  $z = 3 - 2i$

15)  $z = 9 - i$

16)  $z = -6 - 6i$

17)  $z = 5 + 5i$

18)  $z = -\frac{1}{3} + \frac{5}{6}i$

19)  $z = \frac{1}{2} + \frac{2}{3}i$

20)  $z = -\frac{1}{2} + \frac{15}{2}i$

21)  $z = -2\sqrt{2} - 5\sqrt{2}i$

22)  $z = 2\sqrt{3} + 5\sqrt{2}i$

23)  $z = \sqrt{4} + 5\sqrt{2}i$

24)  $z = \sqrt{2} + 5\sqrt{2}i$

**Exercise 2:** Write the complex number in standard form

1)  $4 + \sqrt{-9}$

2)  $3 + \sqrt{-16}$

3)  $-1 + \sqrt{-1}$

4)  $\sqrt{-100}$

5)  $7 + \sqrt{-2}$

6)  $-4i^2 + 2i$

7)  $\sqrt{-0.0049} + 8$

8)  $3i^2 - 9i$