

(2 points each) ( Work must be shown)

1.  $i^{120}$

- A.  $i$
- B.  $-1$
- C.  $-i$
- D.  $1$

2.  $i^{33}$

- A.  $i$
- B.  $-1$
- C.  $-i$
- D.  $1$

3.  $i^{43}$

- A.  $i$
- B.  $-1$
- C.  $-i$
- D.  $1$

4.  $i^{14}$

- A.  $i$
- B.  $-1$
- C.  $-i$
- D.  $1$

5. What is the value of  $i^2$ ? \_\_\_\_\_ (2 points)

Why? (2 points)

(5 points each) (Work must be shown)

6.  $(4 + 7i) + (3 - 8i)$

7.  $9(3 - 5i) - (-7 + 9i)$

(2 points)

10. Simplify:  $(2 - 5i) - (-6 + 7i)$  (Work must be shown)

A.  $8 - 12i$

B.  $8 + 12i$

C.  $-4 - 12i$

D.  $-4 + 12i$

11. A student answered the following addition of complex numbers. Is their answer correct? Explain.

$$(5 - 7i) + (3 - 2i) = 1 - 31i$$

Unit 1

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

Quadratics

Date: \_\_\_\_\_ Period: \_\_\_\_\_

(5 points) ( Work must be shown)

12.  $(4 + 3i)(2 - 7i)$

13.  $(2 + 5i)^2$

Unit 1

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

Quadratics

Date: \_\_\_\_\_ Period: \_\_\_\_\_

14.  $\frac{4+3i}{2-7i}$

15. 15. Simplify completely:  $(2 + 3i)(3 - 7i)$  ( Work must be shown)  
(3 points)

- a.  $-15 - 5i$
- b.  $10 + 21i$
- c.  $27 - 5i$
- d.  $27 + 5i$

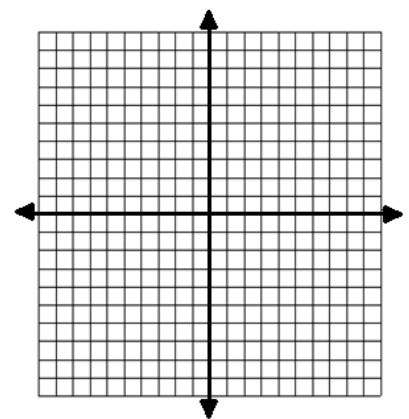
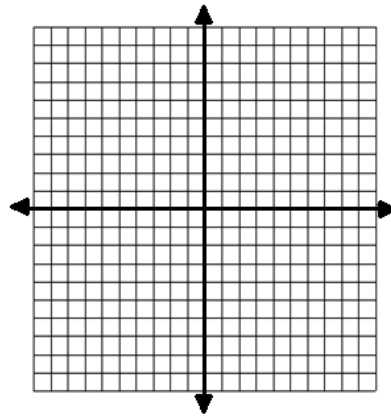
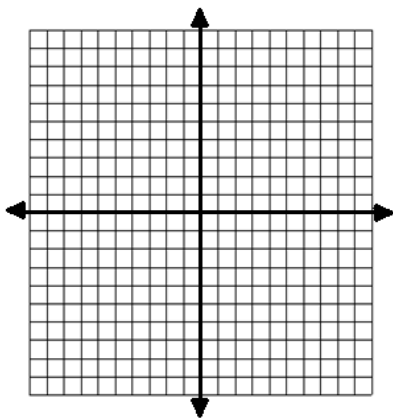
(2 pts each)

Find the Modulus( $\sqrt{a^2 + b^2}$  and graph the following

16.  $5 - 7i$

17.  $3 + 2i$

18.  $-3 - 5i$



- Finding the modulus and graphing Complex Numbers \_\_\_\_\_ / 6