

Name \_\_\_\_\_  
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Date \_\_\_\_\_  
Pre Calculus

## *Radicals/Complex Numbers Review Sheet*

For #1-8, express in simplest radical form

1.  $-2\sqrt{8xy^3} \cdot 4\sqrt{6x^4y^2}$

2.  $2y^2\sqrt[3]{25y^6} \cdot xy\sqrt[3]{10x^5y^3}$

3.  $\frac{10\sqrt{250x^4y^5z^2}}{2\sqrt{5xyz}}$

4.  $\frac{20xy^4\sqrt[3]{48x^8y^{12}}}{4x^3\sqrt{3x^2y^3}}$

5.  $\sqrt{200k} - 2\sqrt{18k}$

6.  $5\sqrt[3]{16x} + 2\sqrt[3]{250x}$

$$7. \frac{10}{6-\sqrt{3}}$$

$$8. \frac{-4}{2+\sqrt{10}}$$

**For #9-10, solve for x**

$$9. x = 1 + \sqrt{x+5}$$

$$10. 3 = -x + \sqrt{x+5}$$

**For #11-14, express in simplest  $a + bi$  form**

11.  $5i^3(6i^7 - 3i^{17})$

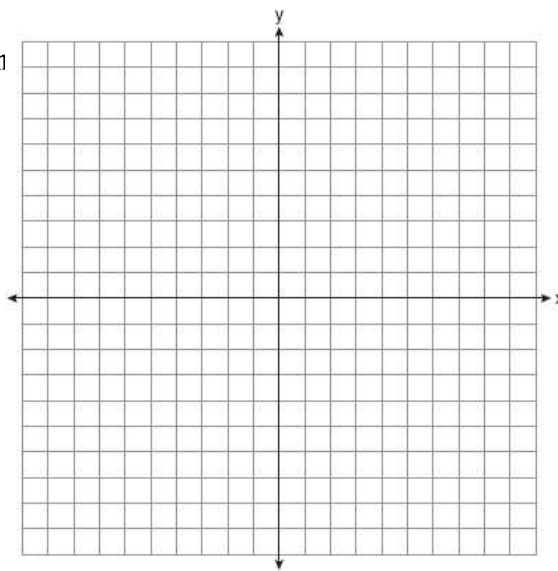
12.  $-2i^9(3i^3 + 4i^{12})$

13.  $\frac{7-2i}{5-i}$

14.  $\frac{6+2i}{-2-7i}$

For #15-16, graph each complex number, find an magnitude of the resultant.

15.  $(-2 + \sqrt{-49})$  and  $(3 - \sqrt{-16})$



16.  $(7 - 4i)$  and  $(-5 + 7i)$

