

Algebra 2  
In Class Review for Quiz

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

In 1 – 16, express each number in terms of  $i$ , and simplify.

1.  $\sqrt{-36}$

2.  $\sqrt{-100}$

3.  $-\sqrt{-81}$

4.  $2\sqrt{-49}$

5.  $\frac{1}{8}\sqrt{-64}$

6.  $-\frac{2}{3}\sqrt{-9}$

7.  $\frac{3}{4}\sqrt{-144}$

8.  $\frac{1}{3}\sqrt{-25}$

9.  $\sqrt{-3}$

10.  $\sqrt{-29}$

11.  $3\sqrt{-11}$

12.  $-\sqrt{-10}$

13.  $\sqrt{-20}$

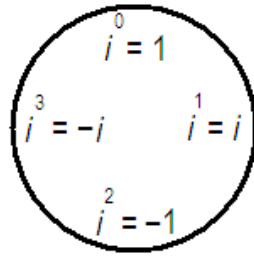
14.  $-\sqrt{-28}$

15.  $2\sqrt{-75}$

16.  $5\sqrt{-8}$

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In 1 – 12, write each given power of  $i$  in simplest terms as 1,  $i$ ,  $-1$ , or  $-i$ . Show how you arrived at your answer.

1. $i^{12}$	2. $i^7$	3. $i^{49}$
4. $i^{72}$	5. $i^{54}$	6. $i^{99}$
7. $i^{300}$	8. $i^{246}$	9. $i^{91}$
10. $i^{473}$	11. $i^{133}$	12. $i^{200}$

**Simplify.**

1)  $(-7 + 7i) - (8 + 3i) - (-6 + i)$

2)  $5 + (-4 + 5i) - (1 + i)$

3)  $(-7 - 7i) - (-7 + 3i) + (6 - 6i)$

4)  $(5 - 4i) - (6 - 6i) + (-3 - 2i)$

5)  $(-4 + 8i) + (4 + 3i) - (-2 - 7i)$

6)  $(5 - 3i) - (4 - 5i) - (4 - 8i)$

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

8)  $(4 + 4i) - (-2 - 7i) - (6i)$

9)  $(2 + 3i) + (4 - 8i) + (2i)$

10)  $(4 + 3i) - (7i) + (-2 + 5i)$

11)  $(-6 + 2i) - (-2 + 6i) + (7i)$

12)  $(2 + 5i) + (6 - i) - (-1 + 6i)$