20/20 = 100

Math 0099
University of North Georgia
Spring 2015
Quiz #8

Name: Key Date: April 10, 2015

Simplify and write in $a + bi$ form.

1. $\sqrt{-49} \cdot \sqrt{-81}$

$7i \cdot 9i = 63i^2 = -63$

$\boxed{-63 + 0i}$

2. $5\sqrt{-20}$

$5 \cdot 2i\sqrt{5} = 10i\sqrt{5}$

$\boxed{0 + 10i\sqrt{5}}$

Add

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

$5 + 6i - 3 + 4i$

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

$\boxed{2 + 10i}$

Multiply

4. $(3+4i)^2$ $(3+4i)(3+4i)$

$9+12i+12i+16i^2$

$9+24i+16(-1)$

$\boxed{-7+24i}$

Divide

5. $\frac{-7}{i} \cdot \frac{-i}{-i}$ $= \frac{7i}{-i^2} = \frac{7i}{(-1)\cdot(-1)} = \frac{7i}{1} = 7i$

$= \boxed{0+7i}$