REVIEW Simplifying Radicals + Complex Numbers

2. $\sqrt{112}$

$\sqrt{16 \cdot 7}$

$\sqrt{16} \cdot \sqrt{7}$

$\boxed{4\sqrt{7}}$

4.28

$16 \cdot 7$

1
4
9
16
25
36
49
64
81
100
121
144
169

3. $\sqrt{54}$

$\sqrt{9 \cdot 6}$

$\sqrt{9} \cdot \sqrt{6}$

$\boxed{3\sqrt{6}}$

4. $\sqrt{216}$

$\sqrt{36 \cdot 6}$

$\sqrt{36} \cdot \sqrt{6}$

$6\sqrt{6}$

$i^2 = -1$

because Dr. Odom says so!

$\sqrt{-1} = i$

Complex Number System

$a + bi$

real

imaginary

Ex1

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

$11 - i$

Ex2

$(5 + 2i) - 1(6 - 3i)$

$5 + 2i - 6 + 3i$

$-1 + 5i$

Ex3

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

	4	$2i$
2	8	$4i$
$-3i$	$-12i$	$-6i^2$

$-6 \cdot -1$

6

$$14-8i$$

5. $\sqrt{-147}$

$\sqrt{49 \cdot 3 \cdot -1}$

$\sqrt{49} \cdot \sqrt{3} \cdot \sqrt{-1}$

$(7\sqrt{3})i$

$7i\sqrt{3}$