Name: Key Hour: _____ Date: _____

Simplifying Complex Radicals Practice

1) $\sqrt{-36}$
$\pm 6i$

2) $\sqrt{-72}$
$\pm 6i\sqrt{2}$

3) $\sqrt{-4}$
$\pm 2i$

4) $\sqrt{-80}$
$\pm 4i\sqrt{5}$

5) $\sqrt{-28}$
$\pm 2i\sqrt{7}$

6) $2\sqrt{-25}$
$\pm 10i$

7) $2\sqrt{-14}$
$\pm 2i\sqrt{14}$

8) $-2\sqrt{-12}$
$\pm 4i\sqrt{3}$

9) $3\sqrt{-100}$
$\pm 30i$

10) $\sqrt{-50}$
$\pm 5i\sqrt{2}$

11) $\sqrt{-1000}$
$\pm 10i\sqrt{10}$

12) $-6\sqrt{4}$
± 12

13) $3\sqrt{-40}$
$\pm 6i\sqrt{10}$

14) $\sqrt{-64}$
$\pm 8i$

15) $\sqrt{-128}$
$\pm 8i\sqrt{2}$

16) $-\sqrt{-12}$
$\pm 2i\sqrt{3}$

17) $\sqrt{-25} + 2$
$2 \pm 5i$

18) $\sqrt{-100} - 4$
$-4 \pm 10i$

19) $\sqrt{-20} + 10$
$10 \pm 2i\sqrt{5}$

Find the roots, zeros, x-intercepts, solutions

20) $2x^2 - 6x + 5 = 0$

$$x = \frac{3}{2} \pm \frac{i}{2}$$

21) $8x^2 - 4x + 5 = 0$

$$x = \frac{1}{4} \pm \frac{3i}{4}$$

22) $5x^2 + 8x + 5 = 0$

$$x = \frac{-4}{5} \pm \frac{3i}{5}$$

23) $5x^2 + 12x + 8 = 0$

$$x = -\frac{6}{5} \pm \frac{2i}{5}$$

24) $2x^2 - 6x + 7 = 0$

$$x = \frac{3}{2} \pm \frac{i\sqrt{5}}{2}$$