

# HOMESWORK: RADICAL PROPERTIES

NAME: \_\_\_\_\_

1. Solve.  $|3x+1| < 10$

2.  $2|x-4|+7=-3$

Simplify.

3.  $\sqrt{200}$

4.  $\sqrt[3]{40}$

5.  $5\sqrt[3]{54}$

6.  $2\sqrt{40} \cdot 5\sqrt{90}$

7.  $\sqrt{8} + \sqrt{50}$

8.  $\sqrt[3]{128} - \sqrt[3]{250}$

9.  $\sqrt{\frac{y^2}{100}}$

10.  $\sqrt{300x^5y^8z^{10}}$

11.  $\frac{2}{\sqrt[3]{5}}$

12.  $\frac{4}{1+3\sqrt{2}}$

Simplify.

13.  $4\sqrt{8}\sqrt{3} \cdot 2\sqrt{32}$

14.  $\sqrt{27} + \sqrt{12} - \sqrt{75}$

Solve.

17.  $2x^2 + 5 = 205$

18.  $x^5 + 1 = 65$

19.  $2(x - 4)^3 - 2 = -110$

20.  $\frac{1}{3}(x + 2)^4 + 4 = 20$

**Reach for the stars...**

23.  $10(3\sqrt{5})^2 + (2\sqrt{3})^2$