Name: _____ Date: _____

Square Root Homework

Find the two square roots of each number:

1. 16

2. 225

Solve each equation for x:

3. $x^2 = 196$

4. $x^2 = \frac{9}{256}$

5. $x^2 = \frac{16}{169}$

6. $x^2 = \frac{1}{25}$

Simplify each expression by evaluating:

7. $5\sqrt{11 + 25}$

8. $\sqrt{\frac{4}{25}} + 3^3 \cdot 3^{-1}$

9. $\sqrt{36} - 4^2$

10. $\sqrt{\frac{64}{4}} + 5^2$

11. $5(\sqrt{225} - 10)$

12. $\sqrt{14 + 35} - 20$

Cube Root Homework

Find the cube root:

1. 27

2. 64

Solve for x:

3. $x^3 = \frac{64}{8}$

4. $x^3 = \frac{8}{27}$

5. $x^3 = \frac{1}{8}$

6. $x^3 = \frac{64}{125}$

Simplify each expression by evaluating:

7. $\sqrt[3]{125} + 2^4 \cdot 2^{-8}$

8. $2(\sqrt[3]{8} + \sqrt{16}) + 3^3$

9. Is the following equation true? $\sqrt{\frac{9}{16}} = \sqrt[3]{\frac{27}{64}}$ Prove your answer with words and math.

10. Is the following inequality true? $\sqrt[3]{216} > 2^{-3} \cdot 2^6$ Prove your answer with words and math.

11. The volume of Cube A is 64 cubic inches. The length of each edge of Cube B is 2 inches longer than the length of each edge in Cube A. How much greater is the volume of Cube B than the volume of Cube A? **Show your work.**