

Final Review Square Roots and Cube Roots

1. Without a calculator compute each **square root**.

a. $\sqrt{100}$ b. $\sqrt{81}$ c. $\sqrt{36}$ d. $\sqrt{225}$ e. $\sqrt{144}$ f. $\sqrt{\frac{64}{25}}$ g. $\sqrt{\frac{900}{49}}$

2. Without a calculator compute each **cube root**.

a. $\sqrt[3]{1000}$ b. $\sqrt[3]{8}$ c. $\sqrt[3]{27}$ d. $\sqrt[3]{125}$ e. $\sqrt[3]{-64}$ f. $\sqrt[3]{-1}$ g. $\sqrt[3]{9^3}$

3. Compute each **square root** to the *nearest 10th*.

a. $\sqrt{99}$ b. $\sqrt{48}$ c. $\sqrt{35}$ d. $\sqrt{224}$ e. $\sqrt{143}$ f. $\sqrt{63}$ g. $\sqrt{899}$

4. Compute each **cube root** to the *nearest 10th*.

a. $\sqrt[3]{1001}$ b. $\sqrt[3]{9}$ c. $\sqrt[3]{28}$ d. $\sqrt[3]{126}$ e. $\sqrt[3]{-63}$ f. $\sqrt[3]{-11}$ g. $\sqrt[3]{-2}$

5. Find the **total surface area** of a cube that has a **volume** of 8.

6. A cylinder with a height of 2 has a volume equal to 32π . What is the radius of this cylinder? $V = \pi r^2 h$.

7. If you triple the sides of any cube, by how many times will the volume increase?

8. A sphere has a volume of 36π . What is the radius of this sphere? $V = \frac{4}{3}\pi r^3$.