

Radical Practice

Name: _____

Date: _____

Question 1

Solve for the square root

I. $\sqrt{9} =$

V. $\sqrt{121} =$

II. $\sqrt{36} =$

VI. $\sqrt{4} =$

III. $\sqrt{144} =$

VII. $\sqrt{25} =$

IV. $\sqrt{100} =$

VIII. $\sqrt{16} =$

$$\sqrt{\quad} = \sqrt[2]{\quad}$$

square root
without index

square root
with index

Radical Practice

Question 2

Solve using a calculator and indicate any radical rules applied

I. $\sqrt[3]{\sqrt{729}}$ =

V. $\sqrt{(-49)^2}$ =

II. $\sqrt{32}$ =

VI. $\sqrt[3]{(-343)^3}$ =

III. $\sqrt[3]{\frac{64}{125}}$ =

VII. $\sqrt{121^3}$ =

IV. $\sqrt[3]{216} \cdot \sqrt[3]{343}$ =

VIII. $\sqrt[8]{256}$ =

Radical Practice

Name: _____ **Key** _____

Date: _____

Question 1

Solve for the square root

I. $\sqrt{9} = 3$

$$3^2 = 9$$

V. $\sqrt{121} = 11$

$$11^2 = 121$$

II. $\sqrt{36} = 6$

$$6^2 = 36$$

VI. $\sqrt{4} = 2$

$$2^2 = 4$$

III. $\sqrt{144} = 12$

$$12^2 = 144$$

VII. $\sqrt{25} = 5$

$$5^2 = 25$$

IV. $\sqrt{100} = 10$

$$10^2 = 100$$

VIII. $\sqrt{16} = 4$

$$4^2 = 16$$

$$\sqrt{\quad} = \sqrt[2]{\quad}$$

square root
without index

square root
with index

Radical Practice

Question 2

Solve using a calculator and indicate any radical rules applied

$$\text{I. } \sqrt[3]{\sqrt[2]{729}} = 3$$

$$\text{V. } \sqrt[2]{(-49)^2} = 49$$

$$\frac{2 \cdot 3}{\text{Power Rule}} \sqrt[2 \cdot 3]{729} \longrightarrow \sqrt[6]{729} = 3$$

$$\text{II. } \sqrt[1]{32} = 32$$

$$\text{VI. } \sqrt[3]{(-343)^3} = -343$$

$$\text{III. } \sqrt[3]{\frac{64}{125}} = 0.8$$

$$\text{VII. } \sqrt[2]{121^3} = 1,331$$

$$\frac{\sqrt[3]{64}}{\sqrt[3]{125}} = \frac{4}{5} = 0.8$$

Quotient Rule

$$\left(\sqrt[2]{121}\right)^3 \longrightarrow 11^3 = 1,331$$

Power of a Radicand Rule

$$\text{IV. } \sqrt[3]{216} \cdot \sqrt[3]{343} = 42$$

$$\text{VIII. } \sqrt[8]{256} = 2$$

$$\sqrt[3]{216 \cdot 343} \longrightarrow \sqrt[3]{74,088} = 42$$

Product Rule