Radical Practice

Name: _____ Date: _____

Question 1

Solve for the square root

I. $\sqrt{9}$ =

II. $\sqrt{36}$ =

III. $\sqrt{144}$ =

IV. $\sqrt{100}$ =

V. $\sqrt{121}$ =

VI. $\sqrt{4}$ =

VII. $\sqrt{25}$ =

VIII. $\sqrt{16}$ =

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

square root without index

square root with index

Radical Practice

Question 2

Solve using a calculator and indicate any radical rules applied.

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

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

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

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

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

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

VII. $\sqrt[2]{121^3}$ =

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

Radical Practice

Name: **Key** Date: _____

Question 1

Solve for the square root

I. $\sqrt{9} = 3$

$3^2 = 9$

II. $\sqrt{36} = 6$

$6^2 = 36$

III. $\sqrt{144} = 12$

$12^2 = 144$

IV. $\sqrt{100} = 10$

$10^2 = 100$

V. $\sqrt{121} = 11$

$11^2 = 121$

VI. $\sqrt{4} = 2$

$2^2 = 4$

VII. $\sqrt{25} = 5$

$5^2 = 25$

VIII. $\sqrt{16} = 4$

$4^2 = `6$

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

square root without index — square root with index

Radical Practice

Question 2

Solve using a calculator and indicate any radical rules applied.

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

$\sqrt[2 \cdot 3]{729} \longrightarrow \sqrt[6]{729} = 3$

Power Rule

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

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

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

Quotient Rule

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

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

Product Rule

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

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

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

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

Power of a Radicand Rule

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