

## Algebra II Worksheet #3 Unit 10 Selected Solutions

Find the exact value of each of the following. Express irrational numbers using standard radical form. (No calculators are to be used on this worksheet.)

$$6. \quad 10^{\frac{2}{3}} = \left(\sqrt[3]{10}\right)^2 = \sqrt[3]{100}$$

$$8. \quad \left(\frac{-1}{2}\right)^{-2} = \left(\frac{-2}{1}\right)^2 = 4$$

$$12. \quad \left(\frac{2}{3}\right)^{-\frac{1}{2}} = \left(\frac{3}{2}\right)^{\frac{1}{2}} = \sqrt{\frac{3}{2}} = \sqrt{\frac{6}{4}} = \frac{\sqrt{6}}{2}$$

$$14. \quad 75^{0.5} = 75^{\frac{1}{2}} = \sqrt{75} = 5\sqrt{3}$$

$$16. \quad 1.5^{-2} = \left(\frac{3}{2}\right)^{-2} = \left(\frac{2}{3}\right)^2 = \frac{4}{9}$$

$$20. \quad \left(\frac{3}{4}\right)^{\frac{1}{3}} = \sqrt[3]{\frac{3}{4}} = \sqrt[3]{\frac{6}{8}} = \frac{\sqrt[3]{6}}{2}$$