

Name: Selected Answers

Date: \_\_\_\_\_

Homework: Unit 1 – Foundations

Honors PreCalculus

All homework must be completed NEATLY on your own paper.

**Homework 1.9: Radical Expressions**

Simplify the expression. Use absolute value signs when necessary.

1.  $\sqrt[3]{\sqrt{64x^6}}$

$2x$

2.  $\sqrt[4]{x^4y^6z^8}$

$|xy|z^2\sqrt[4]{y^2}$

3.  $(\sqrt[7]{x^4y^3})^{35}$

$x^{20}y^{15}$

Rationalize the denominator.

4.  $\frac{y}{\sqrt{3}+\sqrt{y}}$

$\frac{-y(\sqrt{3}-\sqrt{y})}{y-3}$

5.  $\sqrt[3]{\frac{2xy^2}{5x^4y^7}}$

$\frac{\sqrt[3]{50y}}{5xy^2}$

Rationalize the numerator.

6.  $\frac{\sqrt{x}+2}{7}$

$\frac{x-4}{7(\sqrt{x}-2)}$

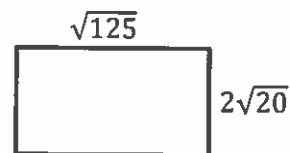
7.  $\frac{\sqrt{x+1}-\sqrt{x}}{x}$

$\frac{1}{x\sqrt{x+1}+\sqrt{x}}$

8. Find the exact value for the perimeter and area of the rectangle given.

$P = 18\sqrt{5}$

$A = 100$



Factor the following expressions completely.

9.  $(x-1)(x+2)^2 - (x-1)^2(x+2)$

$3(x-1)(x+2)$

10.  $x^2(x^2-1) - 9(x^2-1)$

$(x-1)(x+1)(x-3)(x+3)$

11.  $r^2 - 6rs + 9s^2$

$(r-3s)^2$

