

Name: _____

Date: _____

HW Pre-Calculus 11 Section 5.1 Basics with Radicals

1. Simplify each of the following and convert it to a mixed radical

a) $\sqrt{72}$	b) $\sqrt{128}$	c) $\sqrt{125}$
d) $\sqrt{600}$	e) $3\sqrt{8}$	f) $\sqrt{a^3b^4c}$
g) $\sqrt[3]{88}$	h) $\sqrt[3]{54}$	i) $\sqrt[4]{96}$
j) $\sqrt[3]{a^5b^3c^4}$	k) $\sqrt[4]{6480}$	l) $\sqrt[n]{a^n b^{n+2} c^{n-1}}$

2. Simplify by Adding or Subtracting the radicals:

a) $5\sqrt{9} + 2\sqrt{49}$	b) $2\sqrt{12} - \sqrt{3}$	c) $2\sqrt{10} + 7\sqrt{10} - 6\sqrt{10}$
d) $5\sqrt{7} - 3\sqrt{7} + 6\sqrt{7}$	e) $5\sqrt{3} - 7\sqrt{12} + 2\sqrt{27}$	f) $3\sqrt{12} + 2\sqrt{75} - 2\sqrt{3}$
g) $\sqrt{54} + \sqrt{150} - 2\sqrt{216}$	h) $4\sqrt{12} + \sqrt{300} - 2\sqrt{147}$	i) $\frac{1}{3}\sqrt{180} - 3\sqrt{245} - 2\sqrt{80}$

j) $4\sqrt{180} - 3\sqrt{250} - \frac{1}{5}\sqrt{125} + \frac{1}{2}\sqrt{40}$	k) $9\sqrt{75} - \frac{11}{3}\sqrt{18} - 12\sqrt{72} + \frac{5}{2}\sqrt{12}$
l) $\frac{2}{5}\sqrt{125} - \frac{2}{3}\sqrt{243} - \frac{1}{3}\sqrt{45} + \frac{1}{2}\sqrt{48}$	m) $\sqrt{48} - \frac{2}{3}\sqrt{20} - 0.5\sqrt{27} + 2\sqrt{45}$
o) $b\sqrt{27a^3b} - a\sqrt{3ab^3} - 2\sqrt{75a^3b^3} + 4\sqrt[3]{a^4b^4}$	p) $\frac{\sqrt{8a}}{4} + \frac{\sqrt{27b}}{3} - 0.3\sqrt{50a} - 4\sqrt{75b}$

3. The area of a square is 8 and the perimeter is $a\sqrt{b}$, what are the values of "a" and "b"?

4. Arrange each of the following from Least to Greatest:

a) $-6\sqrt{2}$, $-3\sqrt{7}$, $-2\sqrt{17}$, $-4\sqrt{5}$, $-2\sqrt{21}$, $-5\sqrt{3}$

b) $6\sqrt{0.1}$, $3\sqrt{0.7}$, $7\sqrt{0.05}$, $2\sqrt{0.8}$, $4\sqrt{0.5}$, $5\sqrt{0.3}$

5. Find the PERIMETER and AREA of the following rectangle:

