Operations with Radicals

Terms

Radical – A _____ root, _____ root or _____ root.

Examples:

Entire Radical – A radical with a _____ of __.

Examples:

Mixed Radical – A radical with a _____ other than __.

Examples:

Like Radicals – Radicals that have the _____ _____ under the radical symbol.

Examples:

Laws

$\sqrt{x}+\sqrt{y}\neq$ _____	$\sqrt{x}\times\sqrt{y}=$ _____	$\sqrt{x}\div\sqrt{y}=$ _____
$\sqrt{x}-\sqrt{y}\neq$ _____	$\sqrt{x}\times k=$ _____	$\sqrt{x}\div k=$ _____
$\sqrt{x}+\sqrt{x}=$ _____		

1. Express each of the following as a ***mixed radical*** in lowest terms.

a. $\sqrt{27}$

b. $\sqrt{32}$

c. $\sqrt{56}$

2. Express as an ***entire radical***.

a. $5\sqrt{13}$

b. $-4\sqrt{7}$

c. $-4\sqrt{7}$

3. Simplify. Write as a mixed radical, in lowest terms.

a. $\sqrt{12}+\sqrt{48}$

b. $\sqrt{8}-\sqrt{18}$

c. $-4\sqrt{3}\times 8\sqrt{13}$

d. $7\sqrt{24}-2\sqrt{75}+3\sqrt{54}-\sqrt{108}$

e. $\left(2\sqrt{5}-3\sqrt{2}\right)\left(7\sqrt{10}+3\sqrt{6}\right)$