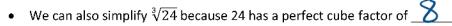
## 3- ma11 mixed and entire radicals.docx

Friday, September 27, 2019 12:26 PM

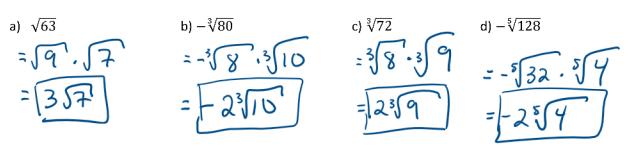
			Ma1
1.3 MIXED AND ENTIRE RADICALS	Name:	Blk:	_
Recall:			
Perfect Squares - 1, 4, 9, 1	6,28,36,49,6	4,81,109121,	144
Perfect Cubes- 1, 8, 27, 64	1,125,216		
What is an Entire Radical? A radical sign w ex. J28 3/64 What is a Mixed Radical? A nun number and	ith a number uber written as	under it s a product o	. <del>с</del>
C. 355 , 491	0		
Equivalent Forms: a) $\sqrt{16 \cdot 9}$ is equivalent to $\sqrt{16} \cdot \sqrt{9}$ l	because: b) $\sqrt[3]{8 \cdot 27}$ is e	quivalent to $\sqrt[3]{8} \cdot \sqrt[3]{27}$ becaus	se:
$\sqrt{144} = 4.3$	3/21/2	= 2.3	
12 = 12	6	= 6	
	6	= 6	
		= 6	
This leads us to MULTIPLICATION PROPERT			
This leads us to <b>MULTIPLICATION PROPERT</b> $\sqrt[n]{ab} = \sqrt[n]{a} \cdot \sqrt[n]{b}$ , where <i>n</i> <b>*WE can use this property to simplify</b> <b>squares or perfect cubes, etc. but hav</b> 1) Writing an Entire Radical as a Mixed $\sqrt[n]{2}, \sqrt[n]{1},$ • We can simplify $\sqrt{24}$ because	TY OF RADICALS a is a natural number, and a a y square roots and cube root we factors that are perfect square	nd <i>b</i> are real numbers s and more, that are <i>not</i> per juares or perfect cubes. es or cubes	



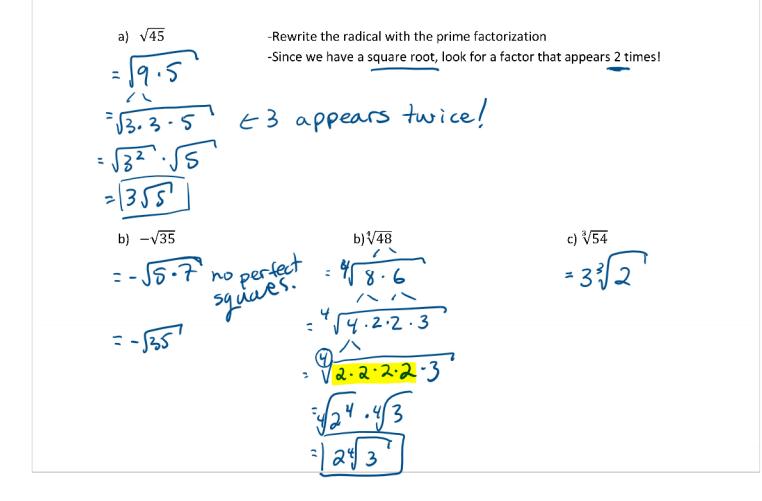
• Re-write  $\sqrt[3]{24}$  as a product of two factors, with the first one being the perfect cube:



Example 1) Simplify the following radicals- Write each entire radical as a mixed radical.



Example 2) Simplify using prime factors...



2) Writing Mixed Radicals as Entire Radicals

- Use the multiplication property of radicals
- Combine these under the same radical sign and multiply

Example 3 Write each as an entire radical:

