Math 20-2 Name: _____

Radical Unit Review One (Radical Quiz 2 September 2018)

1. Express as a radical in simplest form.
   a) $\sqrt{54}$ b) $\sqrt[3]{54}$

2. Express as a whole radical.
   a) $6\sqrt{2}$ b) $2\sqrt[3]{6}$

3. Write the expression in simplest form.
   a) $2\sqrt{6} + 7\sqrt{3} - 7\sqrt{6}$ b) $3\sqrt{50} + \sqrt{75} + 4\sqrt{2}$

3. Write the expression in simplest form.
   c) $\sqrt[3]{40} - 5\sqrt{20} - 2\sqrt{80}$

4. Express each product in simplest form.
   a) $2\sqrt{5}\left(3\sqrt{2} + \sqrt{3}\right)$
   b) $\left(7\sqrt{2} + \sqrt{6}\right)\left(\sqrt{2} - 2\sqrt{6}\right)$

5. Simplify each expression – rational denominators in simplest form.

a) $\frac{10\sqrt{21}}{5\sqrt{3}}$

b) $\frac{4\sqrt{18}}{3\sqrt{5}}$

c) $\frac{8\sqrt{6}+12\sqrt{2}}{4\sqrt{3}}$

6. Solve.

a) $4\sqrt{x+2} = 20$

b) $3\sqrt{x-5} - 4 = 8$

7. Solve each puzzle:

A magic square is a grid of numbers where the values in each of the rows, columns and diagonals adds up to the same sum, known as the "magic number." Use your math skills to fill in each of these magic squares.

The magic number is 34.

			13
	10		
	6	7	12
4	15		1

Each row, column and diagonal add up to the values shown. Can you logically fill in the rest of the grid of numbers?

		8		48
14	7		5	38
15			4	24
6			1	26
46	32	32	26	21

8. Solve at least one puzzle:

Sudoku

Two-by-Three With Six Possible Values

4	2	1		5	3
6	3				
5	6				
1	5	2		4	
3					1

		5		1	2
					6
3	5	2		6	4
	1				3
				2	
			3		5