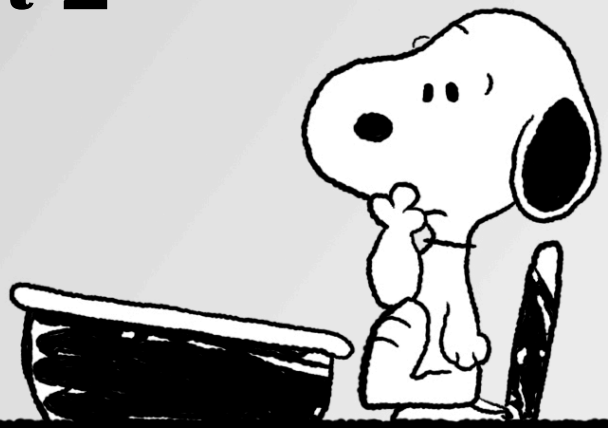
LG #11
Radicals
Part 2



Topic 1

Example 1 & 2

Solve an Equation with One Radical

Solve algebraically $\sqrt{x+1} + 3 = 5$ - then check by graphing

1 - isolate the radical $\sqrt{x+1} = 5-3$

$\sqrt{x+1} = 2$

2 - square both sides $\left(\sqrt{x+1}\right)^2 = 2^2$

$x+1 = 4$

3 - solve $x = 3$

*CHECK FOR EXTRANEOUS

Try: *a*) $3 + \sqrt{3x+4} = 7$

b) $2\sqrt{x+6} = -4$

c) $-8 + \sqrt{\frac{3y}{5}} = -2$

d) $r - \sqrt{5-r} = -7$

Topic 2 **Example 3**

Solve an Equation with Two Radicals

Solve $\sqrt{x+2} + \sqrt{3x-2} = 0$ - then check by graphing.

1st isolate the radicals on each side of = sign

$$\sqrt{x+2} = -\sqrt{3x-2}$$

2nd square both sides

$$\left(\sqrt{x+2}\right)^2 = \left(-\sqrt{3x-2}\right)^2$$

$$x+2 = 3x-2$$

3rd solve

$$-2x = -4$$

$$x = 2$$

*CHECK FOR EXTRANEOUS

2 does not check out - the solution is **NO SOLUTION**

Try:

a) $\sqrt{2y-3} = \sqrt{y+1}$

b) $\sqrt{19+6x} = \sqrt{2x-5}$

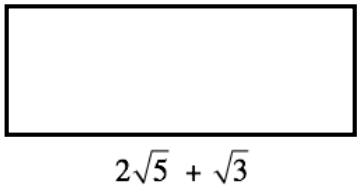
c) $7 + \sqrt{3x} = \sqrt{5x+4} + 5$

d) $3\sqrt{x-2} = \sqrt{2x+3}$

Solve by Graphing Calculator ONLY!

Some more difficult questions you will come across.

Find the perimeter:



Find the area: