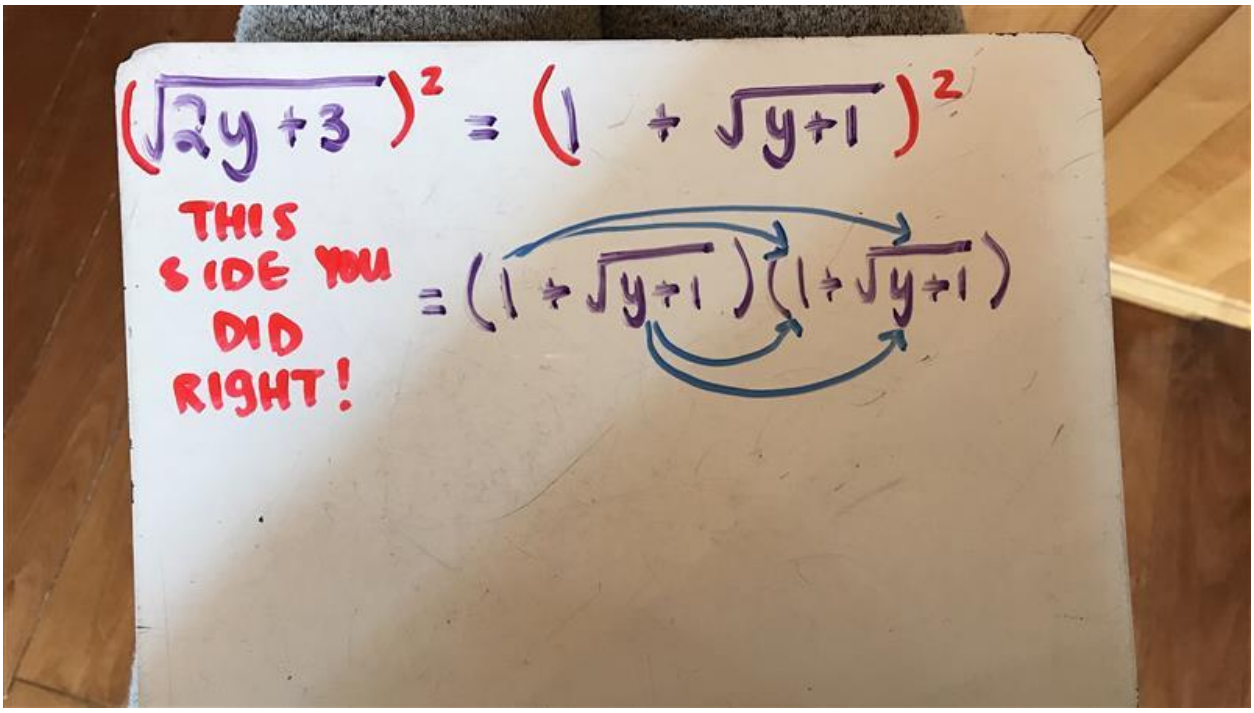
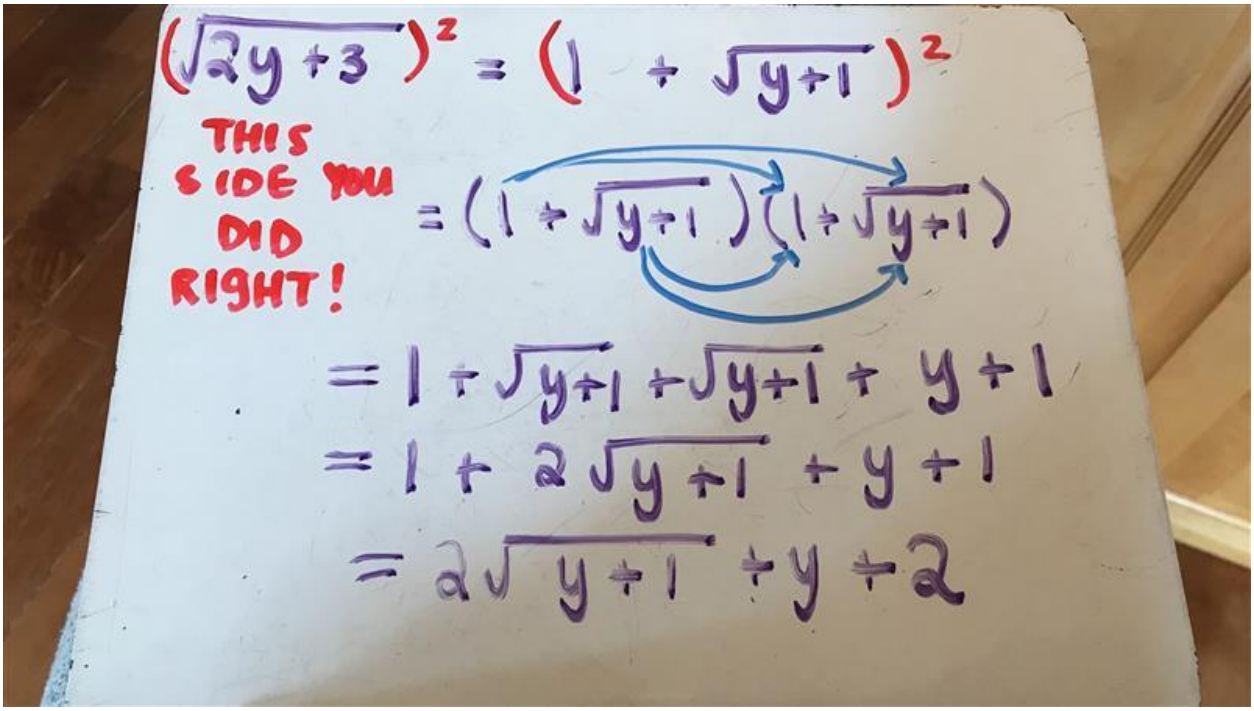
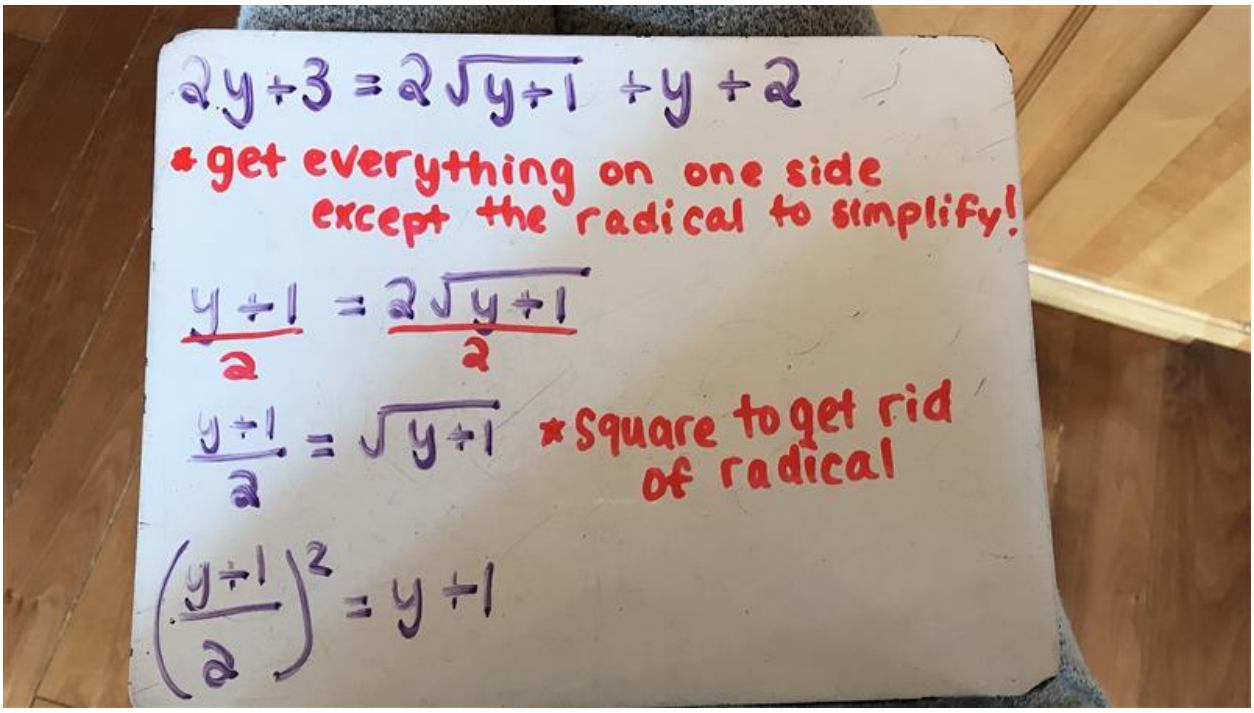
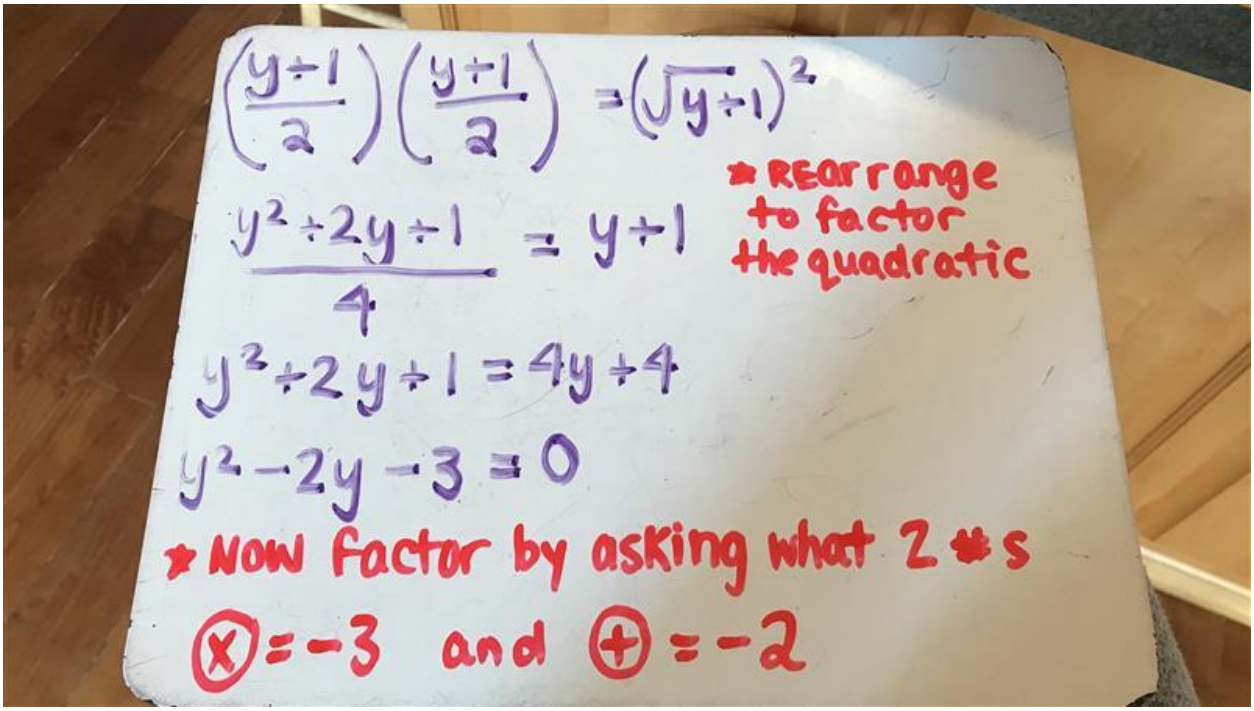
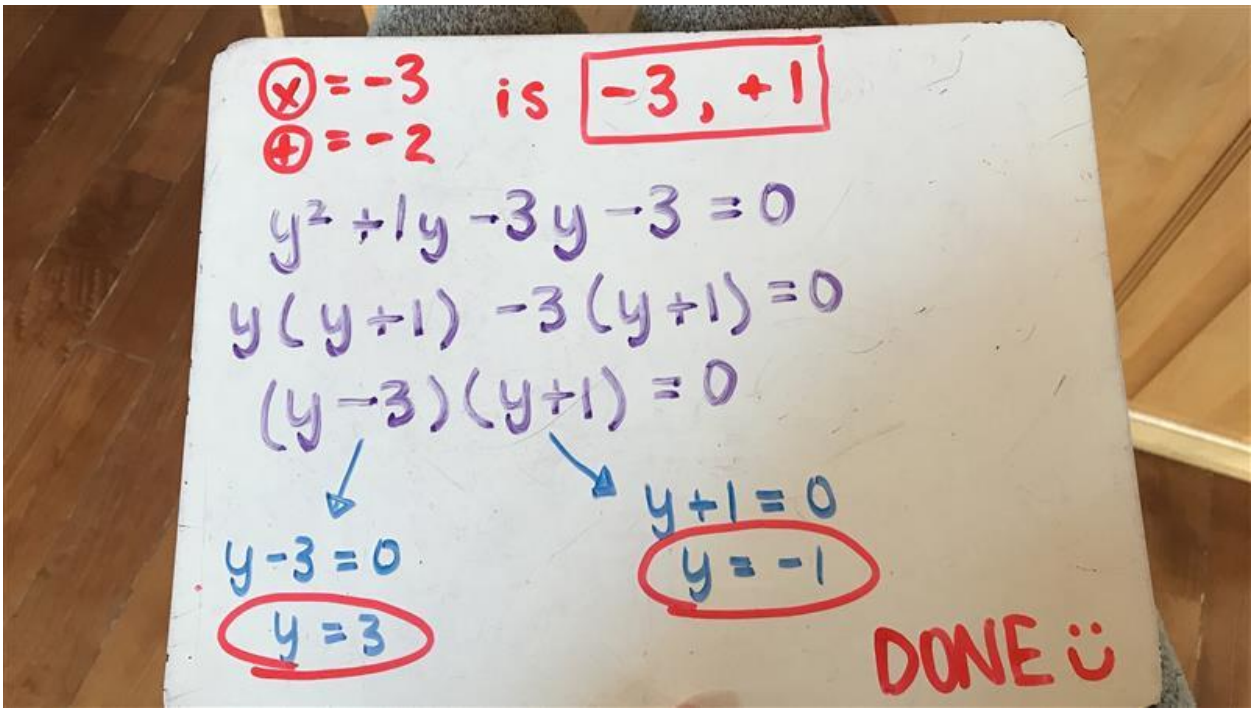

$(\sqrt{2y+3})^2 = (1 + \sqrt{y+1})^2$
THIS SIDE YOU DID RIGHT!
$= (1 + \sqrt{y+1})(1 + \sqrt{y+1})$


$(\sqrt{2y+3})^2 = (1 + \sqrt{y+1})^2$
THIS SIDE YOU DID RIGHT!
$= (1 + \sqrt{y+1})(1 + \sqrt{y+1})$
$= 1 + \sqrt{y+1} + \sqrt{y+1} + y + 1$
$= 1 + 2\sqrt{y+1} + y + 1$
$= 2\sqrt{y+1} + y + 2$


$2y+3=2\sqrt{y+1}+y+2$
* get everything on one side except the radical to simplify!
$\frac{y+1}{2}=\frac{2\sqrt{y+1}}{2}$
$\frac{y+1}{2}=\sqrt{y+1}$
* square to get rid of radical
$\left(\frac{y+1}{2}\right)^2=y+1$


$\left(\frac{y+1}{2}\right)\left(\frac{y+1}{2}\right)=\left(\sqrt{y+1}\right)^2$
$\frac{y^2+2y+1}{4}=y+1$
* REARRANGE to factor the quadratic
$y^2+2y+1=4y+4$
$y^2-2y-3=0$
* NOW factor by asking what 2 #s
⊗ = -3 and ⊕ = -2


⊗ = -3
⊕ = -2
is
-3, +1
y² + 1y - 3y - 3 = 0
y(y + 1) - 3(y + 1) = 0
(y - 3)(y + 1) = 0
y - 3 = 0
y = 3
y + 1 = 0
y = -1
DONE ☺