Complete the Square

$x^2 + 8x + 25$

$x^2 + 8x + 16$

$(x + 4)^2 = (x+4)(x+4) = x^2 + 8x + 16$

$x^2 + 10x$ $+25$

$(x+5)^2$

$x^2 - 6x$ $+9$

$(x-3)^2$

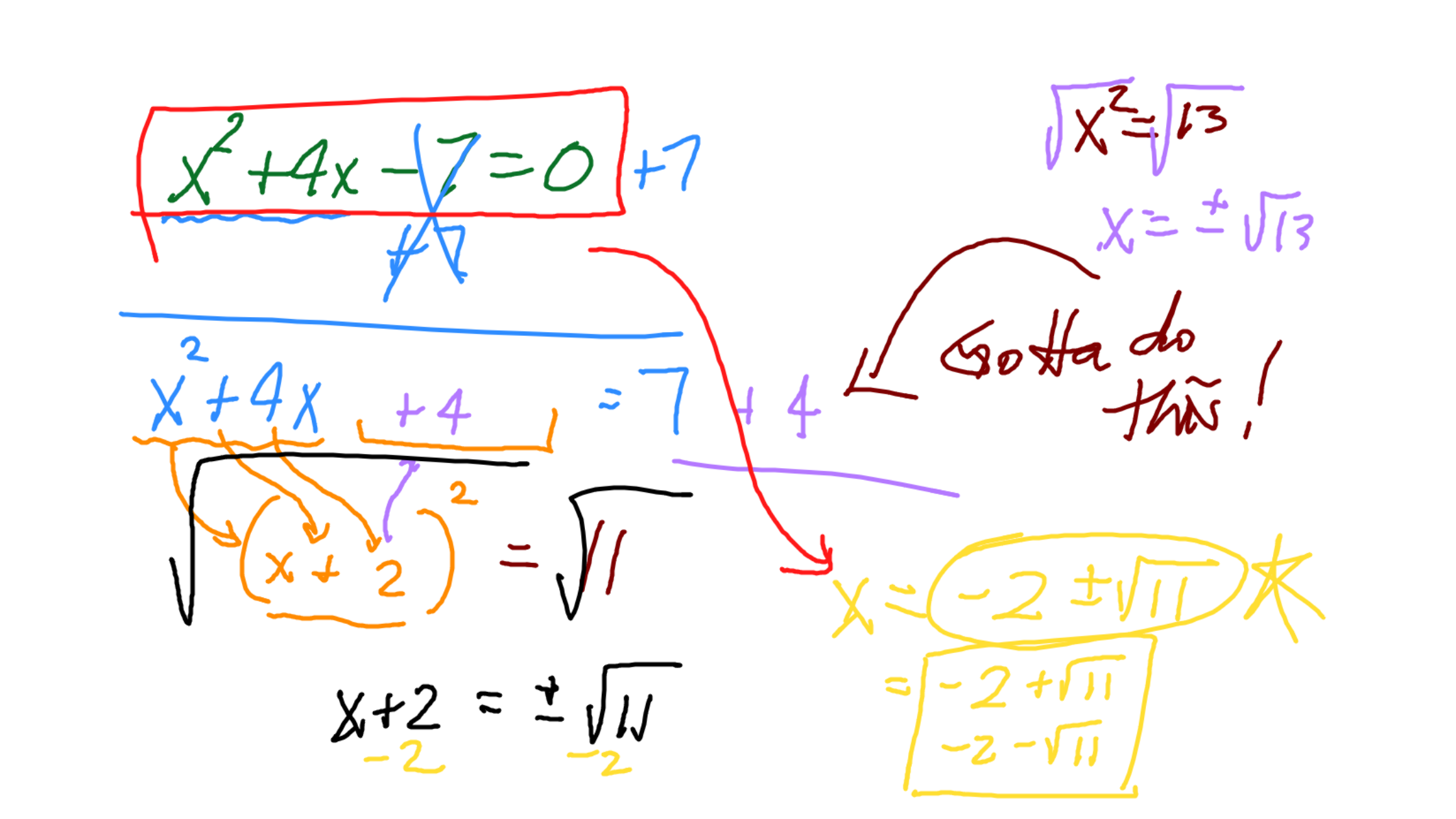
1. Last number is always positive

2. In your factor, the number is $\frac{1}{2}$ of 'b'
(# in front of x)

ax^2+bx+c

x^2+6x+9

$(x+3)^2$


$x^2+4x-7=0$
$+7$
$x^2+4x+4=7+4$
$+4$
$(x+2)^2=\sqrt{11}$
$x+2=\pm\sqrt{11}$
-2
-2
$x=-2\pm\sqrt{11}$
$=-2+\sqrt{11}$
$-2-\sqrt{11}$
$\sqrt{x^2}=\sqrt{13}$
$x=\pm\sqrt{13}$
Gotta do this!

$$x^2 + 8x = -1$$

$$x^2 + 8x + 16 = -1 + 16$$

$$\sqrt{(x+4)^2} = \sqrt{15}$$

$$x + 4 = \pm\sqrt{15}$$

$$-4 \quad -4$$

$$x = -4 \pm \sqrt{15}$$

$$= -4 + \sqrt{15}$$

$$-4 - \sqrt{15}$$

#11

p386

6-9, 11, 20-27