Test Notes

ch 2A

factoring $a=1$

$x^2 + bx + c$

b ↑ add, c ↑ multiply

* always check for GCF 1st

$\boxed{\text{ex1}}$ $x^2 + \overset{A}{16}x + \overset{M}{63}$

$(x+7)(x+9)$

$\boxed{\text{ex2}}$ $2x^2 - 26x + 84$

GCF: 2 $\quad 2(x^2 - 13x + 42)$

$2(x-6)(x-7)$

* to solve one side must be zero

$\boxed{\text{ex3}}$ $x^2 - x - 20 = 0$

$\underbrace{(x-5)}\underbrace{(x+4)} = 0$ factor 1st

$x-5=0 \qquad x+4=0$

$\boxed{x=5} \qquad \boxed{x=-4}$ ← these are the roots/zeros/x-intercepts

factor $a \neq 1$

$\boxed{\text{ex4}}$ $4x^2 - 10x - 6 = 0$

① GCF?

$2(2x^2 - 5x - 3) = 0$

② $a \cdot c$ & b $\quad a \cdot c = -6$

$b = -5$

③ what 2 #s mult. to get ac & add to get b? -6 & 1

④ replace b

$\underbrace{2x^2 - 6x} + \underbrace{1x - 3} = 0$

$2x(x-3) + 1(x-3) = 0$

$2(2x+1)(x-3) = 0$

$\boxed{x = -1/2} \quad \boxed{x=3}$

factored form

$y = a(x - r_1)(x - r_2)$