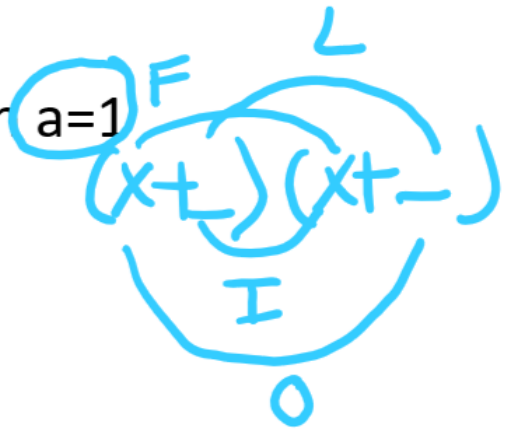


Factoring Quadratics when $a=1$

$$ax^2 + bx + c$$

= $(0+I)$ (L)



1. $x^2 - 7x + 12$

~~a.c~~ ~~12~~
-4 -3

~~b~~ ~~-7~~

$(x-4)(x-3)$

2. $x^2 + 9x + 20$

a.c 20
1,20
2,10
4,5

~~5~~ ~~4~~

$(x+5)(x+4)$

3. $x^2 - 16x - 36$

~~1,36~~ ~~-36~~
2,18
3,12
4,9

~~2~~ ~~-18~~

$(x+2)(x-18)$

4. $3p^2 + 33p + 30$ → check for GCF

$3(p^2 + 11p + 10)$

~~1~~ ~~10~~ ~~10~~

$3(p+1)(p+10)$ Don't forget GCF

Factoring Trinomials (a = 1)

Factor each completely.

1) $b^2 + 8b + 7$

$$\begin{array}{r} 7 \\ \times \\ 1 \\ \hline 8 \end{array} (x+7)(x+1)$$

2) $n^2 - 11n + 10$

$$\begin{array}{r} 10 \\ \times \\ -1 \\ \hline -11 \end{array} (x-10)(x-1)$$

3) $m^2 + m - 90$

$$\begin{array}{r} 10 \\ \times \\ -9 \\ \hline -1 \end{array} (x+10)(x-9)$$

4) $n^2 + 4n - 12$

$$\begin{array}{r} 6 \\ \times \\ -2 \\ \hline 4 \end{array} (n+6)(n-2)$$

5) $n^2 - 10n + 9$

$$\begin{array}{r} 9 \\ \times \\ -1 \\ \hline -10 \end{array} (n-9)(n-1)$$

6) $b^2 + 16b + 64$

$$\begin{array}{r} 64 \\ \times \\ 8 \\ \hline 16 \end{array} (b+8)^2$$

7) $m^2 + 2m - 24$

$$\begin{array}{r} 6 \\ \times \\ -4 \\ \hline 2 \end{array} (m+6)(m-4)$$

8) $x^2 - 4x + 24$

$$\begin{array}{r} 24 \\ \times \\ 4 \\ \hline \end{array} \text{not factorable}$$

$$\begin{array}{r} 1, 24 \\ 2, 12 \\ 3, 8 \\ 4, 6 \end{array}$$

9) $k^2 - 13k + 40$

$$\begin{array}{r} 40 \\ \times \\ -5 \\ \hline -13 \end{array} (x-8)(x-5)$$

10) $a^2 + 11a + 18$

$$\begin{array}{r} 18 \\ \times \\ 2 \\ \hline 11 \end{array} (x+9)(x+2)$$

11) $n^2 - n - 56$

$$\begin{array}{r} 7 \\ \times \\ -8 \\ \hline -1 \end{array} (n+7)(n-8)$$

12) $n^2 - 5n + 6$

$$\begin{array}{r} 6 \\ \times \\ -2 \\ \hline -5 \end{array} (n-3)(n-2)$$

$$13) b^2 - 6b + 8$$

$$14) n^2 + 6n + 8$$

$$15) 2n^2 + 6n - 108$$

$$16) 5n^2 + 10n + 20$$

$$17) 2k^2 + 22k + 60$$

$$18) a^2 - a - 90$$

$$19) p^2 + 11p + 10$$

$$20) 5v^2 - 30v + 40$$

$$21) 2p^2 + 2p - 4$$

$$22) 4v^2 - 4v - 8$$

$$23) x^2 - 15x + 50$$

$$24) v^2 - 7v + 10$$

$$25) p^2 + 3p - 18$$

$$26) 6v^2 + 66v + 60$$