

16,

$$16. p^3q - pq$$

$$pq(p^2 - 1)$$

$$pq(p-1)(p+1)$$

$$15. st^2 - s$$

$$s(t^2 - 1)$$

$$s(t-1)(t+1)$$

$$a^2 \pm 2ab + b^2 = (a \pm b)^2$$

$$a^2 - b^2$$

$$ax^2 + bx + c$$

$$4x^2 - 13x + 45$$

$$(3x + 2)(4x + 1)$$

$$12x^2 + 3x + 8x + 2$$

$$12x^2 + 11x + 2$$

first  $\nearrow$   $12x^2$  +  $11x$  +  $2$   $\nwarrow$  last  
 sum of outer & inner

$$x^2 + 9x + 14$$

$$(x + 2)(x + 7)$$

$$7x + 2x = 9x \checkmark$$

1	14
2	7
3	
4	
5	
6	
7	

$$y^2 - 14y + 13 \quad \begin{array}{l} \leftarrow \text{add} \\ \text{multiply} \end{array} \quad 1, 13$$
$$(y-1)(y-13)$$
$$(y-13)(y-1)$$

$$y^2 + 3y + 4 \quad \begin{array}{l} \cancel{1, 4} \\ \cancel{2, 2} \end{array}$$

~~$(y+1)(y+4)$~~

prime

← difference between 0 + 1

$$x^2 - 2x - 8$$

$$(x + 2)(x - 4)$$

or

$(x - 4)(x + 2)$

1, 8
2, 4

-2 + 4 = 2

-4 + 2 = -2

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

$$\rightarrow x^2 - 2x - 8 \checkmark$$

$$m^2 - 2m - 35$$

$$y^2 - 5y + 6$$

$$t^2 + 2t - 15$$