10.5 Factoring the Trinomial x^2+bx+c

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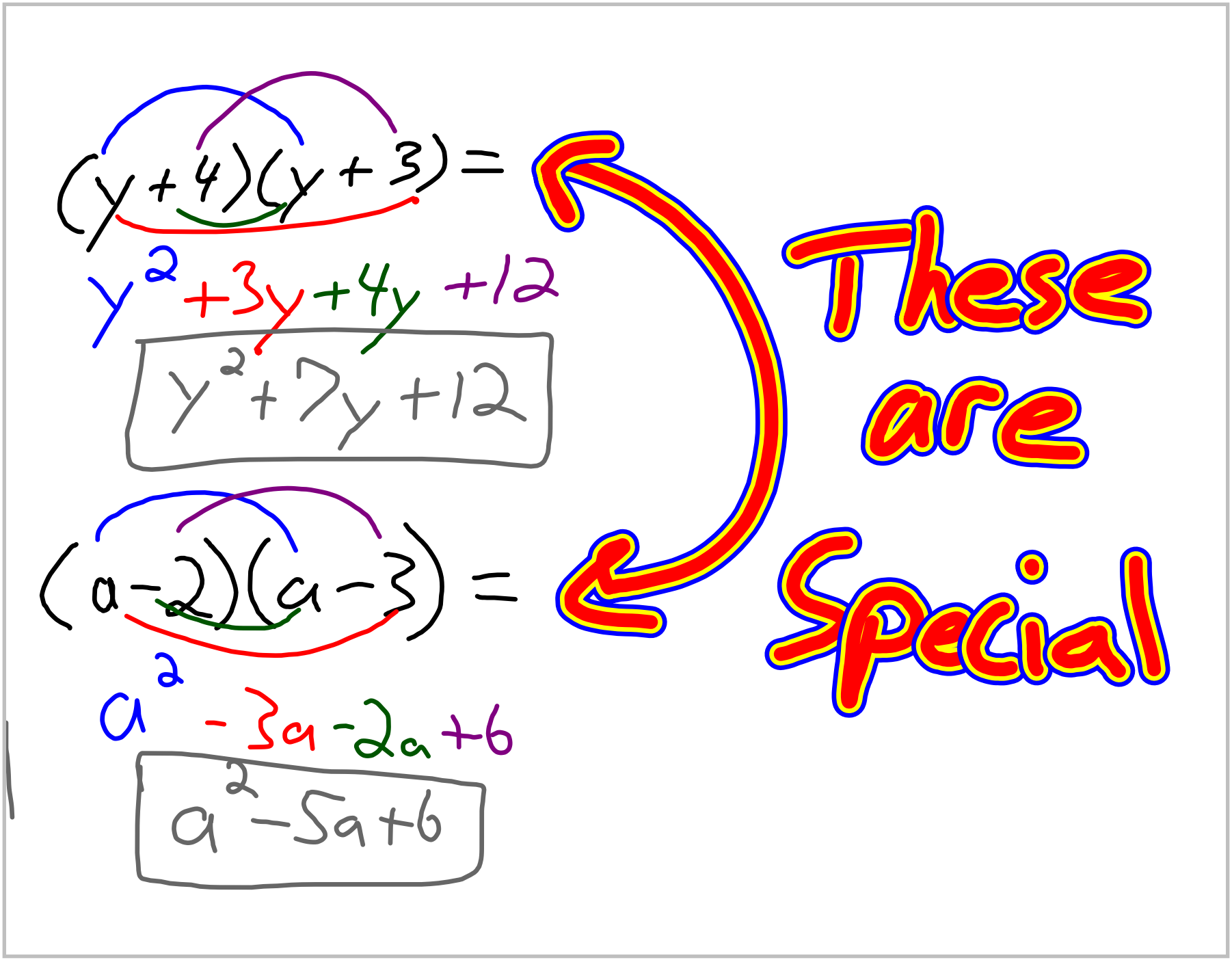
$(x+4)(x+2) = x^2+6x+8$

What is the Relationship?

* Add the `4' & `2' to get `6'!
* Multiply the `4' & `2' to get `8'!


(y+4)(y+3)=
y²+3y+4y+12
y²+7y+12
(a-2)(a-3)=
a²-3a-2a+6
a²-5a+6
These are Special

Factor: (Reverse F.O.I.L)

What 2 #'s Multiply to get `14' + Add to get `9'!

ex1)

$x^2+9x+14$ 1·14 2·7

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

*gray is the free stuff

$(b+7)(b-3) = b^2+4b-21$

$(b-3)(b+7) =$

$(b-7)(b+3) = b^2-4b-21$

$(b+3)(b-7) =$

What is the difference/Pattern?

The First Sign of the trinomial is dependent on the Sign w/ the larger Abs. Value!

Factor: It is special

$c^2 - 5c + 6$ $1 \cdot 6$, $2 \cdot 3$

$(c-2)(c-3)$

$x^2 - 7x + 12$ $1 \cdot 12$, $2 \cdot 6$, $3 \cdot 4$

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

ex3| Factor

$x^2 - 3x - 10$ $1 \cdot 10$ $2 \cdot 5$

$(x+2)(x-5)$

ex 4|

$x^2 - 6x - 7$ $1 \cdot 7$

$(x+1)(x-7)$

O.T.L.

Pg 599:

12-14(a)
15-23(a)

} Show All Work