3.8a Factoring special polynomials

I. Trinomials with 2 variables

If a trinomial is of the form $ax^2 + bxy + cy^2$, factor as usual (3.5) but add the extra variable [＿＿＿＿＿] of the factored binomials.

$x^2 + bx + c$

ex. $a^2 + 4a - 77$

ex. $2x^2 + x - 3$

ex. $12m^2 + 5m - 3$

$ax^2 + bxy + cy^2$

ex. $a^2 + 4ab - 77b^2$

ex. $2x^2 + xy - 3y^2$

ex. $12m^2 + 5mn - 3n^2$

II. A perfect Square Trinomial is a trinomial that breaks down into two [＿＿＿＿＿] factors. Thus, its area model is a [＿＿＿＿＿]

ex. $p^2 + 10pq + 25q^2$

III. <u>A Difference of Squares</u> ... are of the form

$a^2 - b^2 =$

ex. a) $y^2 - 25$ b) $x^2 - 169$

c) $9x^2 - 49$ d) $16x^4 - z^6$

e) $121x^4y^2 - 64y^8$ f) $5x^4 - 80y^4$

e) $162a^4 - 2w^8$

Practice: pg. 194 #4aceg, 6, 7,10aceg, 11a, 13acf, 15, 18, 19-21