Lesson 1.3 – Special Products

Algebra 2R

Find the products mentally:

1)
$$(x-1)(x+1) = \chi^2$$

2)
$$(2y+1)(2y-1) = 4y^2 - 1$$

3)
$$(5z+3)(5z-3) = 252^2 - 9$$

4)
$$(3x^2 - 2y)(3x^2 + 2y) = 9x^4 - 4y^2$$

Rule
$$(a-b)(a+b)$$
 or $(a+b)(a-b) = a^2 - b^2$

Find the products mentally:

5)
$$(x-1)(x-1) = \chi^2 - 2\chi + 1$$

6)
$$(2y+1)(2y+1) = 4y^2 + 4y + 1$$

7)
$$(5z-3)^2 = (5z-3)(5z-3) = 25z^2 - 30z + 9$$

middle term "OI" Cancel out

8)
$$(3x^{2}+2y)^{2} = (3x^{2}+2y)(3x^{2}+2y) = 9x^{4} + 12x^{2}y + 4y^{2}$$

^{Rule} $(a-b)^2 = (a-b)(a-b) = a^2 - 2ab + b^2$ $(a+b)^2 = (a+b)(a+b) = a^2 + 2ab + b^2$