

## HW 14 - Remarkable Identities - 11/16/2022 - Mr. Alexandropoulos

1. Expand the following expressions:

a)  $(2x+1)^2 =$

b)  $(3x-2)^2 =$

γ)  $(2x-7) \cdot (2x+7) =$

2. Decompose the following polynomial/s in factors:

a)  $x^2 - 4x + 4 =$

b)  $4x^2 - 1 =$

γ)  $36a^2 - 12ab + b^2 =$

3. Calculate:

a)  $(x+2)^2 - (x+2) \cdot (x-2) =$

b)  $(a+b)^2 - a^2 + 2ab - 2b^2 =$

4. Factorize the expressions:

a)  $9a^2 + 42ab + 49b^2 =$

b)  $36x^2 + 36x + 8 =$

c)  $(a^2 + y^2 + 2ay) - b^2 =$

5. Factor completely using the formula:

a)  $25a^2 + 49b^2 - 70ab - 15a + 21b =$

b)  $25x^2 - (3y + 4z)^2 =$