Math - Lec - 1

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Abstract

*Note that I don't own this exercise in this document. This was originally created for class 8 of Paradise International School. If you have any question please contact Raju Sir.

1 Questions

1. $x^2 + x$
2. $(x - 1)^2$
3. $x^2 - 36$
4. $(a^2 - b^2)^2$
5. $a^4 - y^4$
6. $a^2 + b^2 - c^2 - 2ab$
7. $1 + a^2 + a^4$

2 Answers

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

2. $(x - 1)^2$
$= (x + 1)(x - 1)$

3. $x^2 - 36$
$= x^2 - 6^2$
$= (x + 6)(x - 6)$

4. $(a^2 - b^2)^2$
$= (a^2 - b^2)(a^2 - b^2)$
$= (a + b)(a - b)(a + b)(a - b)$

5. $a^4 - y^4$
$= (a^2)^2 - (y^2)^2$
$= (a^2 + b^2)(a^2 - b^2)$
$= (a^2 + b^2)(a + b)(a - b)$

6. $a^2 + b^2 - c^2 - 2ab$
$= a^2 - 2ab + b^2 - c^2$
$= (a - b)^2 - c^2$
$= (a - b + c)(a - b - c)$

7. $1 + a^2 + a^4$
$= (1)^2 + 2 * 1 * a^2 + (a^2)^2 - a^2$
$= (1 + a^2)^2 - (a)^2$
$= (1 + a^2 + a)(1 + a^2 - a)$
$= (1 + a + a^2)(1 - a + a^2)$