Learning Journal

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1 Introduction

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

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

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

$$(x+a)(x+b) = x + (a+b)x + ab$$

$$(a+b+c)^{2} = a^{2} + b^{2} + c^{2} + 2ab + 2bc + 2ca$$

$$(a+b)^{3} = a^{3} + 3a^{2}b + 3ab^{2} + b^{3}$$

$$(a-b)^{3} = a^{3} - 3a^{2}b + 3ab^{2} - b^{3}$$