

Problem Set 1

Name: Your Name

Collaborators: Name1, Name2

Problem 1-1.

(a)

$$\begin{aligned}(x + y)^3 &= (x + y)^2(x + y) \\ &= (x^2 + 2xy + y^2)(x + y) \\ &= (x^3 + 2x^2y + xy^2) + (x^2y + 2xy^2 + y^3) \\ &= x^3 + 3x^2y + 3xy^2 + y^3\end{aligned}\tag{1}$$

(b)

(c)

(d)

Problem 1-2.**(a)****(b)**

Problem 1-3.

Problem 1-4.

- (a)
- (b)
- (c)
- (d) Submit your implementation to `alg.mit.edu`.