

## Chapter 09

**ALGEBRAIC EXPRESSION & IDENTITIES****Example-5:**

Using the formulae for squaring a binomial, evaluate

(i)  $(102)^2$

(ii)  $(98)^2$

**Solution:**

We have,

$$(i) (102)^2 = \left(100 + 2\right)^2$$

$$= (100)^2 + 2(100)(2) + (2)^2$$

$$\left(\because (a+b)^2 = a^2 + 2ab + b^2\right)$$

$$= 10000 + 400 + 4$$

$$\therefore \boxed{(102)^2 = 10404}$$

$$(ii) (98)^2 = (100 - 2)^2$$

$$= (100)^2 - 2(100)(2) + (2)^2$$

$$= 10000 - 400 + 4$$

$$\therefore \boxed{(98)^2 = 9604}$$