

Mathematics

(www.tiwariacademy.net)

(Chapter – 2) (Polynomials)(Exemplar Problems)

(Class – IX)

Exercise 2.3

Question 27:

Factorise the following:

(i) $9x^2 - 12x + 3$

(ii) $9x^2 - 12x + 4$

Answer 27:

(i). Given that: $9x^2 - 12x + 3$
 $= 3(3x^2 - 4x + 1)$
 $= 3(3x^2 - 3x - x + 1)$
 $= 3[3x(x - 1) - 1(x - 1)]$
 $= 3[(x - 1)(3x - 1)]$
 $= 3(x - 1)(3x - 1)$

(ii). Given that: $9x^2 - 12x + 4$
 $= 9x^2 - 6x - 6x + 4$
 $= 3x(3x - 2) - 2(3x - 2)$
 $= (3x - 2)(3x - 2)$

