

Worksheet

1. Find product of following binomial

a) $(6x^2 - 7y^2)(6x^2 - 7y^2)$ b) $(\frac{1}{2}x - \frac{1}{5}y)(\frac{1}{2}x - \frac{1}{5}y)$

c) $(\frac{3}{4}x + \frac{5}{6}y)(\frac{3}{4}x - \frac{5}{6}y)$ d) $(2a + \frac{3}{b})(2a - \frac{3}{b})$

e) $(a^2 + b^2)(-a^2 + b^2)$ f) $(-a + c)(-a - c)$

2. If $x + \frac{1}{x} = 4$ then find values of

a) $x^2 + \frac{1}{x^2}$ (b) $x^4 + \frac{1}{x^4}$

3. If $x - \frac{1}{x} = 9$ then find value of $x^2 + \frac{1}{x^2}$.

4. If $x - \frac{1}{x} = 9$ find $x + \frac{1}{x}$.

5. If $x^2 + \frac{1}{x^2} = 27$ find (i) $x + \frac{1}{x}$ (ii) $x - \frac{1}{x}$

6. If $x + y = 12$ ~~find~~ x^2 and $xy = 14$ find $x^2 + y^2$.

7. Find continued product

a) $(x+2)(x-2)(x^2+4)$ b) $(2x+3y)(2x-3y)(4x^2+9y^2)$

b) $(x-1)(x+1)(x^2+1)(x^4+1)$ d) $(x - \frac{1}{x})(x + \frac{1}{x})(x^2 + \frac{1}{x^2})(x^4 + \frac{1}{x^4})$

8. Using formulae evaluate

a) $(101)^2$ (ii) $(99)^2$ (iii) 101×99

(iv) 88×72 (v) $(82)^2 - (18)^2$