The City School

Past Paper Questions

Algebra
(Algebraic Manipulations)
MATHEMATICS
Class 8

Encircle the correct option.

I. $\dfrac{15x^3y}{9xy^2}$ simplified in the simplest form

A) $\dfrac{y^2}{x^2}$　　　　B) $\dfrac{5x^2}{3y}$　　　　C) $\dfrac{16x^2}{9}$

II. Simplified form of $63x^3y^5 \div 7x^2y^2$ is

A) $9x^{-1}y^{-2}$　　　B) $9x^5y^7$　　　C) $9xy^3$　　　D) $9xy^2$

III. If $5a^2 + 2b$ when $a = 4$ and $b = -3$

A) 64　　　　B) 74　　　　C) 84　　　　D) 94

IV. Simplified form of $64x^3y^5 \div 8x^2y^2$ is

A) $8x^{-1}y^{-2}$　　　B) $8x^5y^7$　　　$8xy^3$　　　D) $8xy^2$

Fill in the Blanks

01. Simplified form of $\dfrac{9a^2b}{27ab^3c}$

Questions

Q no 01) Simplify the following:

I. $\dfrac{36xy^2}{108x^2y}$　　　　II. $\dfrac{4a^3b}{8ab^2}$　　　　III. $(pqr^2)^{-2} \div (p^2r^2q)^{-5}$　　　　IV. $\dfrac{a^3b}{b^2c^4} \div \dfrac{(abc)^3}{a^4b^5c}$

V. $\dfrac{8y}{26(w-x)^2} \div \dfrac{32}{4(w-z)}$　　　VI. $\dfrac{8y^2}{5xz} \times \dfrac{15x^3y}{32x^2z^2} \div \dfrac{27y^3}{16z^3}$　　　VII. $4(a^2-b^2) \div 2(a-b)$

Q no 02) Express the following as a single denominator

I. $\dfrac{4}{(x-1)^2} + \dfrac{5}{(x-1)}$　　　　II. $\dfrac{2x}{5} + \dfrac{x-7}{10}$

Q no 03) Make x the subject of the formula $\dfrac{b-x}{a} = \dfrac{x}{c}$

Q no 04) Make a the subject of the formula $y = \dfrac{a-4}{3-a}$

Q no 05) If $v = u + at$

I. Make a the subject of the formula　　　　II. If $v = 10$, $t = 2$ and $u = 5$, find the value of a.