

Algebra

Least Common Multiple (L.C.M.)

- L.C.M by Factorization

1. Find the L.C.M of the following:

(i) $3a^4b^2c^3$, $5a^2b^3c^5$

Solution: L.C.M of $3 \times 5 = 15$

L.C.M of $3a^4b^2c^3$, $5a^2b^3c^5$ is $15a^4b^3c^5$

(ii) $15x^3y^3z$, $25x^2y^3z^2$

Solution:

$$\begin{array}{r|rr} 5 & 15 & 25 \\ \hline & 3 & 5 \end{array}$$

L.C.M of $15x^3y^3z$, $25x^2y^3z^2$ is $75x^3y^3z^2$

(iii) $15p^3q^4$, $20m^2p^2q^3$, $30mp^3$

Solution:

$$\begin{array}{r|rrr} 5 & 15 & 20 & 30 \\ \hline 2 & 3 & 4 & 6 \\ \hline 3 & 3 & 2 & 3 \\ \hline & 1 & 2 & 1 \end{array}$$

L.C.M of $15p^3q^4$, $20m^2p^2q^3$, $30mp^3$ is $60p^3q^4m^2$.