2 (i) $243 = 3^3 \times 3^2$

Smallest no. by which 243 should be multiplied to get a perfect cube

$= 3$ (to get triplet of 3's)

(ii) $256 = 2^3 \times 2^3 \times 2^2$

Smallest no. by which 256 should be mulliplied to get a perfect cube

$= 2$ (to get triplet of 2's)

(iii) $72 = 2^3 \times 3^2$

Smallest no. by which 72 should be multiplied to get a perfect cube

$= 3$ (to get triplet of 3's)

(iv) $675 = 3^3 \times 5^2$

Smallest no. by which 675 should be multiplied to get a perfect cube

$= 5$ (to get a triplet of 3's)

(v) $100 = 2^2 \times 5^2$

Smallest no. by which 100 should be multiplied to get a perfect cube

$= 2 \times 5$ (to complete triplets of 2 and 5)

$= 10$