Exponents Ex 6.1 Q1

Answer :

We have

(i) $13^2 = 13 \times 13 = 169$

(ii) $7^3 = 7 \times 7 \times 7 = 343$

(iii) $3^4 = 3 \times 3 \times 3 \times 3 = 81$

Exponents Ex 6.1 Q2

Answer :

We know that if 'a' is natural number, then

$(-a)^{\text{even number}}$ = Positive number

$(-a)^{\text{odd number}}$ = Negative number

We have

(i) $(-7)^2 = -7 \times -7 = 49$

(ii) $(-3)^4 = -3 \times -3 \times -3 \times -3 = 81$

(iii) $(-5)^5 = -5 \times -5 \times -5 \times -5 \times -5 = -3125$

Exponents Ex 6.1 Q3

Answer :

We have

(i) $3 \times 10^2 = 3 \times 100 = 300$ [since $10^2 = 10 \times 10 = 100$]

(ii) $2^2 \times 5^3 = 4 \times 125 = 500$ [since $2^2 = 2 \times 2 = 4$ and $5^3 = 5 \times 5 \times 5 = 125$]

(iii) $3^3 \times 5^2 = 27 \times 25 = 675$ [since $3^3 = 3 \times 3 \times 3 = 27$ and $5^2 = 5 \times 5 = 25$]

Exponents Ex 6.1 Q

Answer :

We have

(i) $3^2 \times 10^4 = 9 \times 10000 = 90000$ [since $3^2 = 3 \times 3 = 9$ and $10^4 = 10 \times 10 \times 10 \times 10 = 10000$]

(ii) $2^4 \times 3^2 = 16 \times 9 = 144$ [since $2^4 = 2 \times 2 \times 2 \times 2 = 16$ and $3^2 = 3 \times 3 = 9$]

(iii) $5^2 \times 3^4 = 25 \times 81 = 2025$ [since $5^2 = 5 \times 5 = 25$ and $3^4 = 3 \times 3 \times 3 \times 3 = 81$]

Exponents Ex 6.1 Q5

Answer :

We know that if 'a' is natural number, then

$(-a)^{\text{even number}}$ = Positive number

$(-a)^{\text{odd number}}$ = Negative number

We have

(i) $(-2) \times (-3)^3 = (-2)(-27) = 54$ [since $(-3)^3 = -3 \times -3 \times -3 = -27$]

(ii) $(-3)^2 \times (-5)^3 = 9(-125) = -1125$ [since $(-3)^2 = -3 \times -3 = 9$ and $(-5)^3 = -5 \times -5 \times -5 = -125$]

(iii) $(-2)^5 \times (-10)^2 = -32 \times 100 = -3200$ [since $(-2)^5 = -2 \times -2 \times -2 \times -2 \times -2 = -32$ and $(-10)^2 = -10 \times -10 = 100$]

*********** END *********