



Worksheet on Exponents and Powers



Multiple Choice Questions

1. Using laws of exponents simplify and write the answer in exponential form:

(i) $5^2 \times 5^4 \times 5^3$

(ii) $8^{16} \div 8^{12}$

(iii) $(p^5)^3$

2. Simplify and express each of the following in exponential form:

(i) $\frac{5^4 \times 3^2 \times 4}{3 \times 5^2 \times 2}$

(ii) $((7^2)^3) \times 7^4 \div 7^5$

(iii) $36^4 \div 6^2$

3. Say true or false and justify your answer:

(i) $10 \times 10^{13} = 100^{13}$

(ii) $3^2 > 2^3$

(iii) $4^3 \times 3^4 = 12^7$

4. Express each of the following as a product of prime factors only in exponential form:

(i) 96×36

(ii) 80

(iii) 504×49

5. Simplify:

(i) $\frac{(3^2)^3 \times 5^3}{9 \times 25}$

(ii) $\frac{(-2)^5 \times 9^3 \times 4}{-2 \times 3^2}$

(iii) $\frac{5^3 \times t^3}{25 \times t^2}$



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Answers:

1. (i) 5^9 (ii) 8^4 (iii) p^{15}
2. (i) $5^2 \times 3 \times 2$ (ii) 7^5 (iii) 6^6
3. (i) False (ii) True (iii) False
4. (i) $2^7 \times 3^3$ (ii) $2^4 \times 5$ (iii) $7^3 \times 2^3 \times 3^2$
5. (i) $3^4 \times 5$ (ii) $2^6 \times 3^4$ (iii) $5t$