

EduSahara™ Learning Center Assignment

Grade : Class VIII, CBSE
Chapter : Squares and Square Roots
Name : Prime Factorization and Exponent Notation
Licensed To : Teachers and Students for non-commercial use

1. Find the prime factorization of 600

(i) $5^3 \times 3 \times 5^2$ (ii) $2^3 \times 3 \times 2^2$ (iii) $2^2 \times 3 \times 5^2$

(iv) $2^3 \times 3 \times 5^2$ (v) $2^3 \times 3^2 \times 5^2$

2. Find the prime factorization of 8640

(i) $2^6 \times 3^2 \times 5$ (ii) $2^6 \times 3^3 \times 5$ (iii) $2^6 \times 5^3 \times 5$

(iv) $2^6 \times 3^4 \times 5$ (v) $2^6 \times 1 \times 5$

3. Find the prime factorization of 945

(i) $3^4 \times 5 \times 7$ (ii) $3^3 \times 5 \times 5$ (iii) $3^3 \times 5 \times 7$

(iv) $5^3 \times 5 \times 7$ (v) $3^2 \times 5 \times 7$

4. Find the prime factorization of 18900

(i) $2^3 \times 3^3 \times 5^2 \times 7$ (ii) $2^2 \times 3^3 \times 5 \times 7$ (iii) $2^2 \times 6^3 \times 5^2 \times 7$

(iv) $2^2 \times 3^3 \times 5^2 \times 7$ (v) $2^2 \times 3^3 \times 5^2 \times 5$

5. Find the prime factorization of 294

(i) $2 \times 3^2 \times 7^2$ (ii) $1 \times 3 \times 7^2$ (iii) $2 \times 3 \times 4^2$

(iv) $4 \times 3 \times 7^2$ (v) $2 \times 3 \times 7^2$

6. Find the prime factorization of 56448

(i) $2^7 \times 3^{-1} \times 7^2$ (ii) $5^7 \times 3^2 \times 7^2$ (iii) $2^7 \times 3^2 \times 7^2$

(iv) $2^7 \times 3^3 \times 7^2$ (v) $2^7 \times 3 \times 7^2$

7. Find the prime factorization of 768

(i) $2^8 \times 3^2$ (ii) $2^7 \times 3$ (iii) $(-1)^8 \times 3$

(iv) $2^8 \times 3$ (v) $2^8 \times 5$

8. Find the prime factorization of 3780

(i) $2^2 \times 3^3 \times 8 \times 7$ (ii) $(-1)^2 \times 3^3 \times 5 \times 7$ (iii) $2^2 \times 3^3 \times 4 \times 7$

(iv) $2^2 \times 3^4 \times 5 \times 7$ (v) $2^2 \times 3^3 \times 5 \times 7$

9. Find the prime factorization of 192

(i) $2^6 \times 3$ (ii) $2^6 \times 6$ (iii) $2^6 \times 2$

(iv) $2^6 \times 3^2$ (v) $2^4 \times 3$

10. Find the prime factorization of 22680

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

(iv) $2^3 \times 3^4 \times 7 \times 7$ (v) $2^3 \times 3^5 \times 5 \times 7$

Assignment Key

- 1) (iv)
- 2) (ii)
- 3) (iii)
- 4) (iv)
- 5) (v)
- 6) (iii)
- 7) (iv)
- 8) (v)
- 9) (i)
- 10) (i)