

EduSahara™ Learning Center Assignment**Grade : Class VI, SSC****Chapter : Playing with Numbers****Name : Prime Factorization****Licensed To : Teachers and Students for non-commercial use**

1. Find the prime factorization of 40

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

(iv) 2×5 (v) $2^3 \times 5^2$

2. Find the prime factorization of 60

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

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

3. Find the prime factorization of 630

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

(iv) $2 \times 3 \times 5 \times 7$ (v) $2 \times 3^2 \times 8 \times 7$

4. Find the prime factorization of 7560

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

(iv) $0 \times 3^3 \times 5 \times 7$ (v) $2^3 \times 3^2 \times 5 \times 7$

5. Find the number of prime factors of 40

(i) 3 (ii) (-1) (iii) 2 (iv) 1 (v) 4

6. Find the number of prime factors of 74

(i) 3 (ii) 2 (iii) 1 (iv) (-1) (v) 4

7. Find the number of prime factors of 1120

(i) 3 (ii) 4 (iii) 0 (iv) 2 (v) 5

8. Find the number of prime factors of 2400

(i) 4 (ii) 0 (iii) 2 (iv) 3 (v) 5

9. Find the prime factorization of 49

(i) 7 (ii) 7^2 (iii) 7^3

(iv) 4^2 (v) 10^2

10. Find the prime factorization of 82

(i) 2×41^2 (ii) 2×41 (iii) 1×41

(iv) 2×39 (v) 4×41

11. Find the prime factorization of 1617

(i) $1 \times 7^2 \times 11$ (ii) $3 \times 7 \times 11$ (iii) $3 \times 9^2 \times 11$

(iv) $3^2 \times 7^2 \times 11$ (v) $3 \times 7^2 \times 11$

12. Find the prime factorization of 1584

(i) $2^4 \times 3 \times 11$ (ii) $2^4 \times 3^2 \times 11^2$ (iii) $2^4 \times 3^2 \times 13$

(iv) $2 \times 3^2 \times 11$ (v) $2^4 \times 3^2 \times 11$

13. Find the number of prime factors of 38

(i) 1 (ii) 5 (iii) 3 (iv) (-1) (v) 2

14. Find the number of prime factors of 94

(i) 4 (ii) 2 (iii) 1 (iv) 0 (v) 3

15. Find the number of prime factors of 594

(i) 6 (ii) 2 (iii) 3 (iv) 4 (v) 1

16. Find the number of prime factors of 2592

(i) 2 (ii) 3 (iii) 1 (iv) 5 (v) (-1)

Assignment Key

- 1) (ii)
- 2) (ii)
- 3) (ii)
- 4) (iii)
- 5) (iii)
- 6) (ii)
- 7) (i)
- 8) (iv)
- 9) (ii)
- 10) (ii)
- 11) (v)
- 12) (v)
- 13) (v)
- 14) (ii)
- 15) (iii)
- 16) (i)