

Multiples and Factors

Q1. Use any method to factorize the following numbers and write your answer in index notation.

i) 36 $2^2 \times 3^2$

ii) 63 $3^2 \times 7^1$

iii) 256

Q2. Put in the missing multiples below.

i. 8, 16, 24, 32, 40, 48, 56

ii. 4, 8, 12, 16, 20, 24, 28

iii. 10, 20, 30, 40, 50, 60, 70, 80

Notebook Task:

Q3. Find the prime factors of the following numbers using division method then express in index notation.

i. 118

ii. 6425

iii. 1484

iv. 480

Q4. Write the following index notations into expanded form.

i. 7^4

ii. 11^7

iii. $3^6 \times 5^3$

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Q.3 Find the Prime factorization of the following numbers using division method then write in index notation.

i) 118

$$\begin{array}{r|l} 2 & 118 \\ \hline 59 & 59 \\ \hline & 1 \end{array}$$
$$2^1 \times 59^1$$

ii) 6425

$$\begin{array}{r|l} 5 & 6425 \\ \hline 5 & 1285 \\ \hline 257 & 257 \\ \hline & 1 \end{array}$$
$$5^2 \times 257^1$$

iii) 1484

$$\begin{array}{r|l} 2 & 1484 \\ \hline 2 & 742 \\ \hline 7 & 371 \\ \hline 53 & 53 \\ \hline & 1 \end{array}$$

$$2^2 \times 7^1 \times 53^1$$

iv) 480

$$\begin{array}{r|l} 2 & 480 \\ \hline 2 & 240 \\ \hline 2 & 120 \\ \hline 2 & 60 \\ \hline 2 & 30 \\ \hline 3 & 15 \\ \hline 5 & 5 \\ \hline & 1 \end{array}$$

$$2^5 \times 3^1 \times 5^1$$

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Q. 4 Write the following index notation into expanded form:

i) 7^4

$$7 \times 7 \times 7 \times 7 = 2401$$

ii) 11^7

$$11 \times 11 \times 11 \times 11 \times 11 \times 11 \times 11 = 194,871$$

iii) $3^6 \times 5^3$

$$3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 5 \times 5 \times 5 = 6750$$