

GRADE 6 - H.C.F. AND L.C.M.

I. Find the highest common factor and least common multiple of the following pairs of numbers:

(i) 576 and 1440

(ii) 625 and 325

(iii) 496 and 1116

II. Word problems on highest common factor (H.C.F.) and lowest common multiple (L.C.M.):

- a) Find the least length of a rope which can be cut into whole number of pieces of lengths 45 cm, 75 cm and 81 cm.
- b) For a dinner party, Abraham is creating individual servings of starters. He has 9 carrot sticks and 18 celery sticks. If he wants each serving to be identical, with no food left over, what is the greatest number of servings Abraham can create?
- c) The soccer team and the American football team are sharing the field for their practices today. The soccer team meets for practice every 2 days, and the American football team meets every 4 days. How many days from now will they have to share the field again?
- d) This afternoon, Sara noticed that the number of the page assigned for homework is divisible by both 12 and 2. What is the smallest possible page number that could have been assigned?
- e) Explain the difference between listing the factors of a number and listing the multiples of a number
- f) Two neon lights are turned on at the same time. One blinks every 4 seconds and the other blinks every 6 seconds. In 60 seconds, how many times will they blink at the same time?
- g) At a display booth at an amusement park, every visitor gets a gift bag. Some of the bags have items in them as shown in this table.
 - i. Items in the Gift Bags

Items	Bags
Hat	Every 2 nd visitor
T-Shirt	Every 7 th visitor
Backpack	Every 10 th visitor

How often will a bag contain all three items? (choose the answer)

- A. Every 14 bags B. Every 19 bags C. Every 70 bags D. Every 140 bags

III. Fill in the smallest digit to make the number divisible by:

(i) by 5 : 7164__, 32197__

(ii) by 3 : 1__43, 47__05, __316

(iii) by 6 : __428, 9__52, 721__

(iv) by 4 : 2462__, 91__ __, 670__

(v) by 8 : 1232__, 59__16, 4642__

vi) by 9 : 123 _ 56 , 3789_

IV. Shahad says that the bigger a number the more factors it has. Is she right? Use examples to justify your answer.

V. Put the following sets of numbers in order of their H.C.F, from lowest to highest:

a) 12, 15 and 18

H.C.F of 12,15 and 18 =

b) 27, 18 and 45

H.C.F of 27, 18 and 45 =

c) 105, 210 and 5

H.C.F of 105, 210 and 5 =

H.C.F in order(lower to) =

VI. Answer the following

a) The largest number that divides 1447 and 382 leaving remainder 7 is

b) Find the L.C.M of 36, 18, 72, and 54.

c) The prime factors of 112 is ____