

Name: _____ Date: _____

Problems on HCF and LCM

Q1. Find the least number which when divided by 4, 9 and 16 leave remainder 6 in each case.

Sol.

Q2. Three tankers contain 322 litres, 483 litres and 644 litres of petrol respectively. Find the maximum capacity of a container that can measure the diesel of the three containers exact number of times.

Sol.

Answers

Problems on HCF and LCM

Q1. Find the least number which when divided by 4, 9 and 16 leave remainder 6 in each case.

Sol. Here, we will find LCM of 4, 9 and 16.

2	4, 9, 16
2	2, 9, 8
2	1, 9, 4
2	1, 9, 2
3	1, 9, 1
3	1, 3, 1
	1, 1, 1

Thus, $LCM = 2 \times 2 \times 2 \times 2 \times 3 \times 3 = 144$

144 is the least number which when divided by the given numbers will leave remainder 0 in each case.

Therefore, the required number is 6 more than 144. The required least number = $144 + 6 = 150$

Q2. Three tankers contain 322 litres, 483 litres and 644 litres of petrol respectively. Find the maximum capacity of a container that can measure the diesel of the three containers exact number of times.

Sol. To find maximum capacity of a container, we will find the HCF of 322, 483 and 644.

161	322, 483, 644
	2, 3, 4

HCF = 161

Therefore, maximum capacity of the required container is 161 litres. It will fill the first container in $322 \div 161 = 2$, second container $483 \div 161 = 3$ and the third in $644 \div 161 = 4$ refills.