

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Problems on HCF and LCM

Q1. Determine the smallest 3-digit number which is exactly divisible by 8, 12 and 16.

Sol.

Q2. A girl purchases two bags of sugars of weights 1200 grams and 1600 grams. Find the maximum value of weight which can measure the weight of the sugar exact number of times.

Sol.

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## Answers

### Problems on HCF and LCM

Q1. Determine the smallest 3-digit number which is exactly divisible by 8, 12 and 16.

Sol. Here, we will find LCM of 8, 12 and 16.

2	8, 12, 16
2	4, 6, 8
2	2, 3, 4
2	1, 3, 2
3	1, 3, 1
	1, 1, 1

Thus,  $LCM = 2 \times 2 \times 2 \times 2 \times 3 = 48$

We need to find smallest 3 digit number multiple of 48

$$48 \times 1 = 48$$

$$48 \times 2 = 96$$

$$48 \times 3 = 144$$

$$48 \times 4 = 192$$

Therefore, the smallest 3 digit divisible by 8, 12 and 16 is 144.

Q2. A girl purchases two bags of sugars of weights 1200 grams and 1600 grams. Find the maximum value of weight which can measure the weight of the sugar exact number of times.

Sol. Maximum weight = HCF of 1200 and 1600

2	1200, 1600
2	600, 800
2	300, 400
2	150, 200
5	75, 100
5	15, 20
	3, 4

$HCF = 2 \times 2 \times 2 \times 2 \times 5 \times 5 = 400$  grams

Hence, the maximum value of weight, which can measure the weight of the sugar exact number of times, is 400 grams.