

# DAV INSTITUTIONS, ODISHA, ZONE-1

DAV PUBLIC SCHOOL, UNIT-8, BHUBANESWAR

SUBJECT-MATHEMATICS, CLASS-VI

CHAPTER-2(FACTORS AND MULTIPLES)

WORKSHEET (BASIC)

TIME : 45 MINS

MAX. MARKS : 20

## Choose the correct option: (2 x 1=2)

1. A composite number has \_\_\_\_\_ factors.  
a) one            b) two            c) more than two    d) none of these
2. A number is divisible by 5 if the digit at ones place is \_\_\_\_\_.  
a) 1 or 3        b) 0 or 5        c) 1 or 2            d) 4 or 8

## Fill in the blanks: (2 x 1=2)

3. HCF of 12 and 36 is \_\_\_\_\_.
4. The first even multiple of 13 is \_\_\_\_\_.

## Answer the following: (2 x 1=2)

5. Write the prime factorization of 64.
6. Are 16 and 21 co-prime?

## Short Answer Type Question-I: (2 x 2=4)

7. Write down the last four 2-digit multiples of 12.
8. By what smallest digit the \* will be replaced to make 2346\*1 divisible by 9

## Short Answer Type Question-II: (2 x 3=6)

9. Test the divisibility of 6790852 by 11.
10. Find the greatest number that will divide 120, 160 and 145 leaving remainder 2 in each case.

## Long Answer Type Question: (1 x 4=4)

11. The wall of a room is 5 m 75 cm long and 7 m high. It is to be decorated with square photo frames leaving no gaps. Find the largest size of frame needed.
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DAV PUBLIC SCHOOL, UNIT-8, BHUBANESWAR

SUBJECT-MATHEMATICS, CLASS -VI

CHAPTER-2 (FACTORS AND MULTIPLES)

WORKSHEET (STANDARD)

TIME : 45 MINS

MAX. MARKS : 20

### Choose the correct option: (2 x 1=2)

- Two prime numbers whose difference is 2 are called \_\_\_\_\_.  
a) co-prime                      b) twin prime                      c) even number                      d) none of these
- A number is divisible by 6 if it is divisible by \_\_\_\_\_ factors of six.  
a) prime                      b) co-prime                      c) composite                      d) even

### Fill in the blanks: (2 x 1=2)

- When two or more integers are multiplied, each integer is called a \_\_\_\_\_ of the product.
- LCM of co-prime numbers is the \_\_\_\_\_ of the numbers.

### Answer the following: (2 x 1=2)

- Express the predecessor of the smallest 5-digit number as the product of primes.
- Find all the numbers less than 50 that are the common multiples of 3 and 4.

### Short Answer Type Question-I: (2 x 2=4)

- What least number should be added to 423987 to make it divisible by 8?
- Can 40 and 160 be the HCF and LCM of two numbers respectively? Give reasons.

### Short Answer Type Question-II: (2 x 3=6)

- Find the least length of a rope which can be cut into whole number of pieces of lengths 45cm, 75cm and 81cm.
- Find the smallest number which when increased by 20 is exactly divisible by 90 and 144.

### Long Answer Type Question: (1 x 4=4)

- A terrace of dimension 10m x 7m is to be fitted with square tiles of largest possible size. What should be the size of the tiles and how many such tiles are required?
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DAV PUBLIC SCHOOL, UNIT-8, BHUBANESWAR

SUBJECT-MATHEMATICS, CLASS -VI

CHAPTER-2 (FACTORS AND MULTIPLES)

WORKSHEET (ADVANCE)

TIME : 45 MINS

MAX. MARKS : 20

**Choose the correct option: (2 x 1=2)**

1. LCM of co-prime numbers is the \_\_\_\_\_ of the numbers  
a) sum            b) difference            c) product            d) quotient
2. The HCF of two numbers is 24. The number which can be their LCM is \_\_\_\_\_.  
a) 84            b) 120            c) 128            d) 148

**Fill in the blanks: (2 x 1=2)**

3. The smallest 3-digit odd composite number is \_\_\_\_\_.
4. A number less than the sum of its factors except itself is called an \_\_\_\_\_.

**Answer the following: (2 x 1=2)**

5. LCM of two numbers is 12 times their HCF. The product of the numbers is 3072. Find their HCF and LCM.
6. The product of two numbers is 2028 and their HCF is 13. Find the number of such pairs.

**Short Answer Type Question-I: (2 x 2=4)**

7. The LCM of two prime numbers  $a$  and  $b$  ( $a > b$ ) is 161. Find the value of  $2a - b$ .
8. Determine the greatest 3-digit number exactly divisible by 7, 9 and 12.

**Short Answer Type Question-II: (2 x 3=6)**

9. If the ratio of two numbers is 4:5 and their HCF is 4, then find their LCM.
10. Mohan has a cricket match every 4<sup>th</sup> day, Ramesh has one every 5<sup>th</sup> day. When will they have a match on the same day?

**Long Answer Type Question: (1 x 4=4)**

11. Six bells commence tolling together and toll at intervals of 2, 4, 6, 8, 10 and 12 seconds respectively. In 30 minutes, how many times do they toll together?
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DAV PUBLIC SCHOOL, UNIT-8, BHUBANESWAR

SUBJECT-MATHEMATICS, CLASS -VI

CHAPTER-2 (FACTORS AND MULTIPLES)

WORKSHEET (HOTS)

1. Pencils come in packages of 10. Erasers come in packages of 12. Aayesha wants to purchase the smallest number of pencils and erasers, so that she will have exactly 1 eraser per pencil. How many packages of pencils and erasers should she buy?
  2. How many numbers less than 20 can be written as the sum of two prime numbers?
  3. A farm has two bells – one that rings every 3 minutes and another that rings every  $3\frac{1}{2}$  minutes. Suppose the bells ring together at noon. What is the first time after 2 pm that they will ring together again?
  4. What are the two numbers nearest to 20000 which can exactly divisible by 4,7,8,6 and 5.
  5. Three numbers are in the ratio of 3:4:5 and their LCM is 2400. Find their HCF.
  6. The LCM of two numbers is 12 times their HCF. The sum of the HCF and LCM is 403. If one number is 93, then find the other.
  7. What will be the least number which when doubled will be exactly divisible by 12, 18, 21 and 30?
  8. Three numbers which are co-prime to each other are such that the product of the first two is 551 and that of the last two is 1073. Find the sum of the three numbers.
  9. Find the HCF of  $\frac{9}{10}$ ,  $\frac{12}{25}$ ,  $\frac{18}{35}$  and  $\frac{21}{40}$
  10. The sum of two given numbers  $P$  and  $Q$  is 56. Their LCM and HCF is 96 and 8 respectively. Find the sum of  $\frac{1}{P} + \frac{1}{Q}$ .
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