# STD VI

1. Test the divisibility of the following numbers by 2:
   (i) 2650     (ii) 69435     (iii) 59628
   (iv) 789403     (v) 357986     (vi) 367314

2. Test the divisibility of the following numbers by 3:
   (i) 733     (ii) 10038     (iii) 20701
   (iv) 524781     (v) 79124     (vi) 872645

3. Test the divisibility of the following numbers by 4:
   (i) 618     (ii) 2314     (iii) 63712
   (iv) 35056     (v) 946136     (vi) 810524

4. Test the divisibility of the following numbers by 5:
   (i) 4965     (ii) 23590     (iii) 35208
   (iv) 723405     (v) 124684     (vi) 438750

5. Test the divisibility of the following numbers by 6:
   (i) 2070     (ii) 46523     (iii) 71232
   (iv) 934706     (v) 251780     (vi) 872536

6. Test the divisibility of the following numbers by 7:
   (i) 826     (ii) 117     (iii) 2345
   (iv) 6021     (v) 14126     (vi) 25368

7. Test the divisibility of the following numbers by 8:
   (i) 9364     (ii) 2138     (iii) 36792
   (iv) 901674     (v) 136976     (vi) 1790184

8. Test the divisibility of the following numbers by 9:
   (i) 2358     (ii) 3333     (iii) 98712
   (iv) 257106     (v) 647514     (vi) 326999

9. Test the divisibility of the following numbers by 10:
   (i) 5790     (ii) 63215     (iii) 55555

10. Test the divisibility of the following numbers by 11:
    (i) 4334     (ii) 83721     (iii) 66311
    (iv) 137269     (v) 901351     (vi) 8790322

11. In each of the following numbers, replace * by the smallest number to make it divisible by 3:
    (i) 27*4     (ii) 53*46     (iii) 8*711
    (iv) 62*35     (v) 234*17     (vi) 6*1054

12. In each of the following numbers, replace * by the smallest number to make it divisible by 9:
    (i) 65*5     (ii) 2*135     (iii) 6702*
    (iv) 91*67     (v) 6678*1     (vi) 835*86

**13.** In each of the following numbers, replace * by the smallest number to make it divisible by 11:

   (i) 26*5           (ii) 39*43          (iii) 86*72

   (iv) 467*91        (v) 1723*4       (vi) 9*8071

**14.** Test the divisibility of:

   (i) 10000001 by 11     (ii) 19083625 by 11    (iii) 2134563 by 9

   (iv) 10001001 by 3     (v) 10203574 by 4    (vi) 12030624 by 8

**15.** Which of the following are prime numbers?

   (i) 103         (ii) 137        (iii) 161      (iv) 179

   (v) 217        (vi) 277       (vii) 331     (viii) 397

**16.** Give an example of a number

   (i) which is divisible by 2 but not by 4.

   (ii) which is divisible by 4 but not by 8.

   (iii) which is divisible by both 2 and 8 but not by 16.

   (iv) which is divisible by both 3 and 6 but not by 18.

**17.** Write (T) for true and (F) for false against each of the following statements:

   (i) If a number is divisible by 4, it must be divisible by 8.

   (ii) If a number is divisible by 8, it must be divisible by 4.

   (iii) If a number divides the sum of two numbers exactly, it must exactly divide the numbers separately.

   (iv) If a number is divisible by both 9 and 10, it must be divisible by 90.

       *Hint. 9 and 10 are co-primes.*

   (v) A number is divisible by 18 if it is divisible by both 3 and 6.

       *Hint. 3 and 6 are not co-primes. Consider 186.*

   (vi) If a number is divisible by 3 and 7, it must be divisible by 21.

   (vii) The sum of two consecutive odd numbers is always divisible by 4.

   (viii) If a number divides two numbers exactly, it must divide their sum exactly.

## EXERCISE 2C

### Give the prime factorization of each of the following numbers:

| | | | | |
|---|---|---|---|---|
| **1.** 12 | **2.** 18 | **3.** 48 | **4.** 56 | **5.** 90 |
| **6.** 136 | **7.** 252 | **8.** 420 | **9.** 637 | **10.** 945 |
| **11.** 1224 | **12.** 1323 | **13.** 8712 | **14.** 9317 | **15.** 1035 |
| **16.** 1197 | **17.** 4641 | **18.** 4335 | **19.** 2907 | **20.** 13915 |

**Note:**

**1) Do all work of Ex 2B in copy number 2**

**2) No need to solve Question 17 of Ex 2B.**

**3) Do all work of Ex 2C in copy number 1**