EXERCISE 9(B)

1. (i) On dividing 9 by 7, ~~quest~~ quotient = 1 and remainder = 2

(ii) On dividing 18 by 6, quotient = 3 and remainder = 0

(iii) Factor of a number is exact divisor of the number.

(iv) Every no. is a factor of itself.

(v) Every no. is a multiple of one.

(vi) One is factor of every number.

(vii) For every no., its factors are finite and multiples are infinite.

(viii) x is a factor of y, then y is a multiple of x.

2. (i) $16 = 1 \times 16$
$= 2 \times 8$
$= 4 \times 4$
$16 = 1, 2, 4, 8, 16$

(ii) $21 = 1 \times 21$
3×7
$21 = 1, 3, 7, 21$

(iii) $39 = 1 \times 39$
3×13
$39 = 1, 3, 13, 39$

(iv) $48 = 1 \times 48$
2×24
3×16
4×12
6×8
$48 = 1, 2, 3, 4, 6, 8, 12, 16, 24, 48$

(v) $64 = 1 \times 64$
2×32
$8 \times 8, 4 \times 16$
$64 = 1, 2, 8, 32, 64, 4, 16$

(vi) $98 = 1 \times 98$
2×49
7×14
$98 = 1, 2, 7, 14, 49, 98$

3. (i) 4 = 4, 8, 12, 16, 20, 24

(ii) 9 = 9, 18, 27, 36, 45, 54

(iii) 11 = 11, 22, 33, 44, 55, 66

(iv) 15 = 15, 30, 45, 60, 75, 90

(v) 18 = 18, 36, 54, 72, 90, 108

(vi) 16 = 16, 32, 48, 64, 80, 96

4. The product of two numbers = 36

36 = 1 × 36 → 37
2 × 18 → 20
3 × 12 → 15
4 × 9 → (13)
6 × 6 → 12

The numbers are 4 and 9 as 4 × 9 = 36 and 4 + 9 = 13.

5. The product of two numbers = 48

48 = 1 × 48 → 49
2 × 24 → 26
3 × 16 → 19
4 × 12 → (16)
6 × 8 → 14

The nos. are 4 and 12 as 4 × 12 = 48 and 4 + 12 = 16.

6. $54 = 1 \times 54 \rightarrow 53$
$= 2 \times 27 \rightarrow 25$
$= 3 \times 18 \rightarrow 15$
$= 6 \times 9 \rightarrow 3$

The nos. are 6 and 9 as $6 \times 9 = 54$ and $9 - 6 = 3$.

7. $7007 = 7000 + 7$
$= (7 \times 1000) + (7 \times 1)$
$= 7(1000 + 1)$
$= 7 \times 1001$

∴ As 7 and 1001 are factors of 7007, it is divisible by 7.

8. $23,00023 = 2300000 + 23 = (23 \times 100,000) + (23 \times 1)$
$= 23(100,000 + 1) = 23 \times 100,001$

∴ As 23 and 100001 are the factors of 2300023, it is divisible by 23.

9. (i) $11011 = 11000 + 11$
$= (11 \times 1000) + (11 \times 1)$
$= 11 \times (1000 + 1)$
$= 11 \times 10001$

∴ 11011 is divisible by 11.

(ii) $110011 = 110000 + 11$
$= (11 \times 10000) + (11 \times 1)$
$= 11 \times (10000 + 1)$
$= 11 \times 10001$

∴ 110011 is divisible by 11.

(iii) 11000011 = 11000000+11

= (11×1000000)+(11×1)

= 11×(1000000+1)

= 11×1000001

10. (i) 1608 = 1600+8

= (8×1600)+(8×1)

= 8×(1600+1)

= 8×1601

∴ 1608 is divisible by 8

(ii) 56008 = 56000+8

= (8×56000)+(8×1)

= 8×(56000+1)

= 8×56001

∴ 56008 is divisible by 8

(iii) 240008 = 240000+8

= (8×240000)+(8×1)

= 8×(240000+1)

= 8×240001

∴ 240008 is divisible by 8