EX-9(B)

i) On dividing 9 by 7, quotient = 1 and remainder = 2

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

iii) Factor of a number is an extra division of the number, ~~1 and itself~~

iv) Every number is factor of itself

v) Every number is multiple of itself

vi) One is factor of every number

vii) For every number its factor are finite and its multiples are infinite.

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

Factors

2) i) 16 = 1, 2, 4, 8, 16

ii) 21 = 1, 3, 7, 21

iii) 39 = 1, 3, 13, 39

iv) 48 = 1, 2, 3, 4, 6, 8, 12, 16, 24, 48

v) 64 = 1, 2, 4, 8, 16, 32, 64

vi) 98 = 1, 2, 7, 14, 49, 98

First six multiple.

3) i) 4×1 = 4
4×2 = 8
4×3 = 12
4×4 = 16
4×5 = 20
4×6 = 24

ii) 9×1 = 9
9×2 = 18
9×3 = 27
9×4 = 36
9×5 = 45
9×6 = 54

iii) 11×1 = 11
11×2 = 22
11×3 = 33
11×4 = 44
11×5 = 55
11×6 = 66

iv) 15×1 = 15
15×2 = 30
15×3 = 845
5×4 = 60
5×5 = 75
15×6 = 90

vi) 16×1 = 16
16×2 = 32
16×3 = 48
16×4 = 64
16×5 = 80
16×6 = 96

v) 18×1 = 18
18×2 = 36
18×3 = 54
18×4 = 72
18×5 = 90
18×6 = 108

4) Factors of 36 = 1, 2, 3, 4, 6, 9, 12, 18 and 36

$1 \times 36 = 36$

$2 \times 18 = 36$

$3 \times 12 = 36$ $\Rightarrow (4 + 9 = 13)$

$4 \times 9 = 36$

5) Factor of 48 = 1, 2, 3, 4, 6, 8, 12, 16, 24 and 48

$1 \times 48 = 48$

$2 \times 24 = 48$

$3 \times 16 = 48$

$4 \times 12 = 48$ $= (4 + 12 = 16)$

6) Factor of 54 = 1, 2, 3, 6, 9, 18, 27, 54

$1 \times 54 = 54$

$2 \times 27 = 54$

$3 \times 18 = 54$

$6 \times 9 = 54$

∴ 6 and 9 are the number which differ by 3 and whose product is 54.

7) 7007

This can be written as

$= 7000 + 7$

$= 7 \times (1000 + 1)$

$= 7 \times 1001 = 7007$

Clearly 7007 is divisible by 7

8) 2300023

This can be written as

$2300000 + 23$

$= 23 (100000 + 1)$

$= 23 \times 100001$

∴ Clearly 2300023 is divisible by 23

EX-9(B)

9) 11011
This can be written as
= 11000+11
= 11×(1000+1)
= 11×1001

ii) 11011
This can be written as
11000+11
= 11×(10000+1
= 11×10001
∴ Clearly 11011 is divisible by 11

10) i) 1608 = 1600+8
= 8×200+8×1
= 8×(200+1) = 8×201
∴ 1608 is multiple of 8
1608 is divisible by 8

ii) 56008 = 56000+8
= 8×7000+8×1
= 8×(7000+1) = 8×7001
∴ Clearly 56008 is divisible by 8

iii) 240008
= 240000+8
= 8×30000+8×1
= 8×(30000+1)
= 8×30001
= clearly 240008 is divisible by 8

iii) 1100011
This can be written as
= 1100000+11
= 11×(100000+1)
= 11×100001
∴ Clearly 1100011 is divisible by 11

9i) 11011
This can be written as
= 11000+11
= 11×(1000+1)
= 11×1001
11011
∴ Clearly 8 is divisible by 11