Exercise 9 (B)

1. Fill in the blanks:

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

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

iii) Factor of a number is exact divisor of given number

iv) Every number is a factor of itself.

v) Every number is a multiple of itself or 1.

vi) 1 is a factor of every number.

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

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

4. Since, $36 = 1 \times 36, 2 \times 18, 3 \times 12, 4 \times 9, 6 \times 6$

So, the numbers are 4 and 9 as, $4 \times 9 = 36$, and $4 + 9 = 13$.

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5. Since, $48 = 1\times48, 2\times24, 3\times16, 4\times12, 6\times8$,
clearly the numbers are 4 and 12, as $4\times12=48$ and $4+12=16$.

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6. Since, $54 = 1\times54, 2\times27, 3\times18, 6\times9$

clearly, the numbers are 6 and 9, because $9-6=3$ or $6+3=9$, and $6\times9=54$.

7. $7007 = 7000+7$
$= 7\times(1000+1) = 7\times1001$

So, 7 clearly divides 7007 as product of 7 and 1001 is 7007 or 7007 is a multiple of 7.

~~8. $2300023 = 2000000+300000+20+3$~~
~~$= 23\times100,000$~~
~~$= 20\times2000000+20\times300000+20\times$~~

8. $2300023 = 2300000+23$
$= 2300000+23 = 23\times100000+23\times1$
$= 23(100000+1) = 23\times100,001$
Therefore 2300023 is divisible by 23.

9.i) $11011 = 11000+11$
$= 11\times1000+11\times1$
$= 11(1000+1) = 11\times1001$
$\therefore$ 11011 is divisible by 11.

ii) $110011 = 110000+11$
$= 11\times10000+11\times1$
$= 11\times(10000+1)$

$= 11 \times 10,001$

$\therefore$ 110011 is divisible by 11.

iii) $1100011 = 11000000 + 11$

$= 11 \times 1000000 + 11 \times 1$

$= 11 \times (1000000 + 1)$

$= 11 \times 1000001$

$\therefore$ 1100011 is divisible by 11.

(a.i) $1608 = 1600 + 8$

$= 8 \times 200 + 8 \times 1$

$= 8 \times (200 + 1)$

$= 8 \times 201$

$\therefore$ 1608 is divisible by 8.

ii) 56008

$= 56000 + 8$

$= 8 \times 7000 + 8 \times 1$

$= 8 \times (7000 + 1)$

$= 8 \times 7001$

$\therefore$ 56008 is divisible by 8.

iv) 240008

$= 240000 + 8$

$= 8 \times 30,000 + 8 \times 1$

$= 8 \times (30,000 + 1)$

$= 8 \times 30,001$

$\therefore$ 240008 is divisible by 8.