Ex. 9B

1) Fill in the blanks.

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

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

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

iv) Every number is a factor itself.

v) Every number is a multiple of itself.

vi) 1 is a 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.

4) The product of two numbers is 36 and their sum is 13. Find the numbers.

Ans→ The product of two numbers = 36.

The sum of two numbers = 13.

The factors of the number =

1 X 36 = 1 + 36 = 37

2 X 18 = 2 + 18 = 20

3 X 12 = 3 + 12 = 15

4 X 9 = 4 + 9 = 13

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$6 \times 6 = 36 = 6 + 6 = 12$.

Therefore $4 + 9 = 13$. Therefore, the required two numbers are 4 and 9.

5) The product of two two numbers is 48 and their sum is 16. Find the numbers.

Ans→ The product of two numbers = 48.

The sum of two numbers = 16.

Since, $48 = 1 \times 48, 2 \times 24, 3 \times 16, 4 \times 12, 6 \times 8$.

Therefore, the numbers are 4 and 12 as $4 \times 12 = 48$ and $4 + 12 = 16$.

6) Write two numbers which differ by 3 and whose product is 54.

Ans→ The product of two numbers = 54

The difference of two numbers = 3

Since, $1 \times 54, 2 \times 27, 3 \times 18, 6 \times 9$,

Therefore, the numbers are 6 and 9 as $6 \times 9 = 54$ and $6 - 9 = 3$.

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7) Without making any actual division show that 7007 is divisible by 7.

Ans → $7007 = 7000 + 7$

$= 7 \times (1000 + 1) = 7 \times 1001$

Clearly, 7007 is divisible by 7.

8) Without making any action division, show that 2300023 is divisible by 23.

Ans → $2300023 = 2300000 + 23$

$= 23 \times (100000 + 1) = 23 \times 100001 = 2300023.$

Clearly, 2300023 is divisible by 23.

9) Without making any actual division, show that each of the following numbers is divisible by 11.

i) 11011

Ans → $11011 = 11000 + 11$

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

Clearly, 11011 is divisible by 11.

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ii) 110011

Ans → 110011 = 110000 + 11

= 11 × (10000 + 1) = 11000 + 11 = 110011.

Clearly, 110011 is divisible by 11.

iii) 11000011

Ans → 11000011 = 11000000 + 11

= 11 × (1000000 + 1) = 11000000 + 11 = 11000011.

Clearly, 11000011 is divisible by 11.

10) Without actual division, show that each of the following numbers is divisible by 8:

i) 1608

Ans → 1608 = 1600 + 8

= 8 × (1600 + 1) = 8 + 1601 = 1608 1608 = 1600 + 8 =

8 (200 + 1) = 8 × 201

ii) 56008

Ans → 56008 = 56000 + 8 8 (7000 + 1) = 7001 × 8.

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iii) 240008

Ans → 240008 = 240000 + 8

= 8 (30000 + 1) = 30001 × 8

Ex 9.B

2) Write all factors of:

i) 16

Ans→ 1, 2, 4, 8, 16.

ii) 21

Ans→ 1, 3, 7, 21.

iii) 39

Ans→ 1, 3, 13, 39.

iv) 48

Ans→ 1, 2, 3, 4, 6, 8, 12, 16, 24, 48.

v) 64

Ans→ 1, 2, 4, 8, 16, 32, 64.

vi) 98

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Ans → 1, 2, 7, 14, 49, 98

3) Write the first six multiples of:

i) 4

Ans → 4, 8, 12, 16, 20, 24.

ii) 9

Ans → 9, 18, 27, 36, 45, 54.

iii) 11

Ans → 11, 22, 33, 44, 55, 66.

iv) 15

Ans → 15, 30, 45, 60, 75, 90.

v) 18

Ans → 18, 36, 54, 72, 90, 108.

vi) 16

Ans → 16, 32, 48, 64, 80, 96.