EVERWIN VIDHYASHRAM

STD: VI MATHEMATICS

CH – 3 – EX: 3.2 CONT.

10. Express each of the following numbers as the sum of three odd primes.

a. 21

★ 21 → 3 + 5 + 13

★ 21 → 3 + 7 + 11

b. 31

★ 31 → 3 + 5 + 23

31 → 7 + 11 + 13

c. 53

★ 53 → 13 + 17 + 23

53 → 7 + 17 + 29

d. 61

★ 61 → 7 + 13 + 41

★ 61 → 15 + 17 + 29

Ex 3.3

2. Using divisibility tests, determine which of the following numbers are divisible by 4; by 8:

b. 726352

★ 726352 → 52 is divisible by 4

726352 → 352 is divisible by 8

Ans: 726352 → Divisible by 4 and 8.

d. 6000

★ 6000 → divisible by 4

6000 → divisible by 8

Ans: 6000 → Divisible by 4 and 8

f. 14560

★ 14560 → 60 is divisible by 4

14560 → 560 is divisible by 8

Ans: 14560 → Divisible by 4 and 8

g. 21084

★ 21084 → 84 is divisible by 4

21084 → not divisible by 8

A: 21084 → Divisible by 4
not divisible by 8

h. 31795072

★ 31795072 → 72 is divisible by 4

31795072 → Divisible by 8

★A: 31795072 → Divisible by 4 and 8.

j 2150

★ 2150 → 50 is not divisible by 4

2150 → 150 is not divisible by 8

★A: 2150 → not divisible by 4 and 8.

3. Using divisibility tests, determine which of following numbers are divisible by 6:

a. 297144

★ 297144 → 4 is divisible by 2

297144 → 2+9+7+1+4+4

→ 27 → divisible by 3

297144 → Divisible by 2 and 3

★Ans 297144 → Divisible by 6.

f. 438750

438750 → Divisible by 2

438750 → 4+3+8+7+5+0

→ 27 → Divisible by 3

438750 → Divisible by 2 and 3

Ans: 438750 → Divisible by 6.

g. 1790184

1790184 → Divisible by 2

1790184 → 1+7+9+0+1+8+4

→ 30 → Divisible by 3

1790184 → Divisible by 2 and 3

Ans: 1790184 → Divisible by 6

b. 1258

1258 → Divisible by 2

1258 → 1+2+5+8

→ 16 → not divisible by 3

1258 → Divisible by 2, not divisible by 3

Ans: 1258 → not divisible by 6.

d. 61233

61233 → not divisible by 2.

61233 → 6+1+2+3+3

→ 15 → Divisible by 3

61233 → not divisible by 2, divisible by 3

Ans: 61233 → not divisible by 6.

h. 12583

★ 12583 → not divisible by 2

12583 → 1+2+5+8+3

→ 19 → not divisible by 3

12583 → not divisible by 2 and 3

Ans 12583 → not divisible by 6.

4. Using divisibility tests, determine which of the following numbers are divisible by 11.

a. 5445

(5)(4)(4)(5)

★ Sum of the digits

Odd places [from the right]

5+4 → 9

even places

4+5 → 9

Difference → 9 − 9 = 0

Ans 5445 → Divisible by 11.

e. 10000001

(1)0 0 0 0 0 0 1

★ Sum of the digits

Odd places

1+0+0+0 → 1

even places

0+0+0+1 → 1

★ Difference → 1−1

→ 0

★ 10000001 → Divisible by 11.

b. 10824

1 ⓪ 8 ② 4

★ Sum of the digits

Odd places

4 + 8 + 1 → 13

even places

2 + 0 → 2

Difference → 13 − 2

→ 11

★ Ans 10824 → Divisible by 11.

c. 7138965

7 ① 3 ⑧ 9 ⑥ 5

★ Sum of the digits

Odd places

5 + 9 + 3 + 7 → 24

Even places

6 + 8 + 1 → 15

Difference → 24 − 15

→ 9

Ans: 7138965 → not divisible by 11.

5. Write the smallest digit and the greatest digit in the blank space of each of the following numbers so that the number formed is divisible by 3:

b. 4765 − 2

★ 4 + 7 + 6 + 5 + 2 = 24

= 24 is divisible by 3

★ 4765 0 2 = divisible by 3

★ : 47659 2 = 24 + 9

= 33 → Divisible by 3

Ans:

★ Smallest digit → 0 → 47650 2.

★ Greatest digit → 9 → 47659 2

6. Write a digit in the blank space of each of the following numbers so that the number formed is divisible by 11

a. 92−389

⑨ 2 − ⑧ 3 ⑧ 9

9 + 3 + 2 → 14

8 + − + 9 → 17

8 + 8 + 9 → 17 + 8

→ 25

→ 25 − 14

→ 11 → divisible by 11

Ans: 92 8 389

b. 8 _ 9484

(8) _ (9) 4 (8) 4

4 + 4 + _ = 8

8 + 9 + 8 = 25

4 + 4 + 6 = 8 + 6

= 14

= 25 − 14

= 11 → Divisible by 11

Ans: 86 9484.

Ex 3.4

1. Find the common factors of :

a. 20 and 28

★ Factors:

20 → 1 × 20, 2 × 10, 4 × 5

28 → 1 × 28, 2 × 14, 4 × 7

20 → 1, 2, 4, 5, 10, 20

28 → 1, 2, 4, 7, 14, 28

Common factors → 1, 2, 4

A → 1, 2, 4.

d. 56 and 120

★ Factors:

56 → 1 × 56, 2 × 28, 4 × 14, 7 × 8

120 → 1 × 120, 2 × 60, 3 × 40, 4 × 30, 5 × 24, 6 × 20, 8 × 15, 10 × 12

56 → (1) (2) (4), 7, (8), 9, 14, 28, 56

120 → (1) (2) 3, (4), 5, 6, (8), 10, 12, 15, 20, 24, 30, 40, 60, 120

Common factors → 1, 2, 4, 8.

A → 1, 2, 4, 8

2. Find the common factors of :

b. 5, 15 and 25

Factors:

5 → 1 × 5

15 → 1 × 15, 3 × 5

25 → 1 × 25, 5 × 5

5 → (1), (5)

15 → (1), 3, (5), 15

25 → (1), (5), 25

Common factors → 1, 5.

3. Find first three common multiples of :

b. 12 and 18

Multiples of 12

12, 24, 36, 48, 60, 72, 84, 96, 108, 120.