NCERT SOLUTIONS FOR CLASS 6 MATHS PLAYING WITH NUMBERS EXERCISE 3.4

Q1. Find the common factors of:

(a) 20 and 28

(b) 15 and 25

(c) 35 and 50

(d) 56 and 120

Ans:

(a) Factors of 20 = 1, 2, 4, 5, 10, 20

Factors of 28 = 1, 2, 4, 7, 14, 28

Common factors = 1, 2, 4

(b) Factors of 15 = 1, 3, 5, 15

Factors of 25 = 1, 5, 25

Common factors = 1, 5

(c) Factors of 35 = 1, 5, 7, 35

Factors of 50 = 1, 2, 5, 10, 25, 50

Common factors = 1, 5

(d) Factors of 56 = 1, 2, 4, 7, 8, 14, 28, 56

Factors of 120 = 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, 20, 24, 30, 60, 120

Common factors = 1, 2, 4, 8

Q2. Find the common factors of:

(a) 4, 8 and 12

(b) 5, 15 and 25

Ans:

(a) Factors of 4 = 1, 2, 4

Factors of 8 = 1, 2, 4, 8

Factors of 12 = 1, 2, 3, 4, 6, 12

Common factors of 4, 8 and 12 = 1, 2, 4

(b) Factors of 5 = 1, 5

Factors of 15 = 1, 3, 5, 15

Factors of 25 = 1, 5, 25

Common factors of 5, 15 and 25 = 1, 5

Q3.Find the first three common multiples of:

(a) 6 and 8

(b) 12 and 18

Ans:

(a) Multiple of 6 = 6, 12, 18, 24, 30, 36, 42, 28, 54, 60, 72, ...

Multiple of 8 = 8, 16, 24, 32, 40, 48, 56, 64, 72, ...

Common multiples of 6 and 8 = 24, 48, 72

(b) Multiple of 12 = 12, 24, 36, 48, 60, 72, 84, 96, 108, 120, ...

Multiple of 18 = 18, 36, 54, 72, 90, 108, ...

Common multiples of 12 and 18 = 36, 72, 108

Q4. Write all the numbers less than 100 which are common multiples of 3 and 4.

Ans: Multiple of 3 = 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60, 63, 66,

69, 72, 75, 78, 81, 84, 87, 90, 93, 96, 99

Multiple of 4 = 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, 56, 60, 64, 68, 72, 76, 80, 84, 88,

92, 96, 100

Common multiples of 3 and 4 = 12, 24, 36, 48, 60, 72, 84, 96

Q5.Which of the following numbers are co-prime:

(a) 18 and 35

(b) 15 and 37

(c) 30 and 415

(d) 17 and 68

(e) 216 and 215

(f) 81 and 16

Ans: (a) Factors of 18 = 1, 2, 3, 6, 9, 18

Factors of 35 = 1, 5, 7, 35

Common factor = 1

Since, both have only one common factor, i.e., 1, therefore, they are co-prime numbe

(b) Factors of 15 = 1, 3, 5, 15

Factors of 37 = 1, 37

Common factor = 1

Since, both have only one common factor, i.e., 1, therefore, they are co-prime numbe

(c) Factors of 30 = 1, 2, 3, 5, 6, 15, 30

Factors of 415 = 1, 5, ..., 83, 415

Common factor = 1, 5

Since, both have more than one common factor, therefore, they are not co-prime numbe

(d) Factors of 17 = 1, 17

Factors of 68 = 1, 2, 4, 17, 34, 86

Common factor = 1, 17

Since, both have more than one common factor, therefore, they are not co-prime numbe

(e) Factors of 216 = 1, 2, 3, 4, 6, 8, 36, 72, 108, 216

Factors of 215 = 1, 5, 43, 215

Common factor = 1

Since, both have only one common factor, i.e., 1, therefore, they are co-prime numbe

(f) Factors of 81 = 1, 3, 9, 27, 81

Factors of 16 = 1, 2, 4, 8, 16

Common factor = 1

Since, both have only one common factor, i.e., 1, therefore, they are co-prime numbe

Q6. A number is divisible by both 5 and 12. By which other number will that number be always divisible?

Ans: 5 x 12 = 60. The number must be divisible by 60.

Q7. A number is divisible by 12. By what other numbers will that number be divisible? **Ans:** Factors of 12 are 1, 2, 3, 4, 6, 12.

Therefore, the number also be divisible by 1,2 ,3 4 and 6.

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