

## **SSC GD Constable Exam: Relationship between Numbers MCQ Set**

### **Instructions:**

- This practice set contains 100 multiple-choice questions (MCQs) on Relationship between Numbers, designed for SSC GD preparation.
- Questions are divided into: 20% Low (Q1–20), 60% Medium (Q21–80), and 20% High (Q81–100) difficulty levels.
- Each question carries 2 marks. There is a negative marking of 0.50 marks for each incorrect answer, as per the latest SSC GD exam pattern.
- Questions cover key topics from the SSC GD Mathematics syllabus, including number patterns, ratios, proportions, LCM, HCF, divisibility, and applications.
- Answers are provided with concise explanations for clarity.

### **Section 1: Low Difficulty - Basic Number Relationships and Ratios (Questions 1–20)**

1. Which number is twice 15?

- A) 30
- B) 25
- C) 20
- D) 35

Answer: A

Explanation: Twice 15 means  $15 \times 2 = 30$ . The number 30 is double 15.

2. What is the ratio of 12 to 4?

- A) 3:1
- B) 2:1
- C) 1:3
- D) 1:2

Answer: A

Explanation: Ratio of 12 to 4 is  $12/4 = 3/1 = 3:1$ . Simplify by dividing both by 4.

3. If a number is increased by 10, it becomes 20. What is the number?

- A) 8
- B) 10
- C) 12
- D) 14

Answer: B

Explanation: Let the number be  $x$ . Then,  $x + 10 = 20$ , so  $x = 20 - 10 = 10$ .

4. Find the HCF of 6 and 12.

- A) 6
- B) 3
- C) 12
- D) 2

Answer: A

Explanation: Factors of 6: 1, 2, 3, 6; factors of 12: 1, 2, 3, 4, 6, 12. HCF is 6.

5. What is the LCM of 3 and 5?

- A) 15
- B) 8
- C) 10
- D) 12

Answer: A

Explanation: LCM of 3 and 5 is  $3 \times 5 = 15$ , as they have no common factors.

6. Which number is 3 times 8?

- A) 21
- B) 24
- C) 27
- D) 30

Answer: B

Explanation: Three times 8 means  $8 \times 3 = 24$ . The number 24 is triple 8.

7. What is the ratio of 18 to 6?

- A) 2:1

B) 3:1

C) 1:3

D) 1:2

Answer: B

Explanation: Ratio of 18 to 6 is  $18/6 = 3/1 = 3:1$ . Simplify by dividing both by 6.

8. If a number is decreased by 5, it becomes 10. What is the number?

A) 13

B) 14

C) 15

D) 16

Answer: C

Explanation: Let the number be  $x$ . Then,  $x - 5 = 10$ , so  $x = 10 + 5 = 15$ .

9. Find the HCF of 8 and 16.

A) 4

B) 8

C) 16

D) 2

Answer: B

Explanation: Factors of 8: 1, 2, 4, 8; factors of 16: 1, 2, 4, 8, 16. HCF is 8.

10. What is the LCM of 4 and 6?

A) 12

B) 10

C) 8

D) 24

Answer: A

Explanation: LCM of 4 and 6 is  $4 \times 6 \div \text{HCF}(4,6) = 24 \div 2 = 12$ . HCF is 2.

11. Which number is half of 24?

A) 10

B) 12

C) 14

D) 16

Answer: B

Explanation: Half of 24 means  $24 \div 2 = 12$ . The number 12 is half of 24.

12. What is the ratio of 15 to 5?

A) 3:1

B) 2:1

C) 1:3

D) 1:2

Answer: A

Explanation: Ratio of 15 to 5 is  $15/5 = 3/1 = 3:1$ . Simplify by dividing both by 5.

13. If a number is doubled, it becomes 16. What is the number?

A) 6

B) 8

C) 10

D) 12

Answer: B

Explanation: Let the number be  $x$ . Then,  $2x = 16$ , so  $x = 16 \div 2 = 8$ .

14. Find the HCF of 9 and 18.

A) 9

B) 6

C) 3

D) 18

Answer: A

Explanation: Factors of 9: 1, 3, 9; factors of 18: 1, 2, 3, 6, 9, 18. HCF is 9.

15. What is the LCM of 2 and 8?

A) 8

B) 16

C) 4

D) 12

Answer: A

Explanation: LCM of 2 and 8 is  $2 \times 8 \div \text{HCF}(2,8) = 16 \div 2 = 8$ . HCF is 2.

16. Which number is 4 times 5?

- A) 15
- B) 20
- C) 25
- D) 30

Answer: B

Explanation: Four times 5 means  $5 \times 4 = 20$ . The number 20 is quadruple 5.

17. What is the ratio of 20 to 10?

- A) 1:2
- B) 2:1
- C) 1:3
- D) 3:1

Answer: B

Explanation: Ratio of 20 to 10 is  $20/10 = 2/1 = 2:1$ . Simplify by dividing both by 10.

18. If a number is increased by 7, it becomes 15. What is the number?

- A) 6
- B) 7
- C) 8
- D) 9

Answer: C

Explanation: Let the number be  $x$ . Then,  $x + 7 = 15$ , so  $x = 15 - 7 = 8$ .

19. Find the HCF of 10 and 20.

- A) 5
- B) 10
- C) 20
- D) 2

Answer: B

Explanation: Factors of 10: 1, 2, 5, 10; factors of 20: 1, 2, 4, 5, 10, 20.  
HCF is 10.

20. What is the LCM of 5 and 7?

- A) 35
- B) 12
- C) 25
- D) 14

Answer: A

Explanation: LCM of 5 and 7 is  $5 \times 7 = 35$ , as they have no common factors.

**Section 2: Medium Difficulty - Patterns, Proportions, and Applications**  
**(Questions 21–80)**

21. Find the next number in the sequence: 2, 4, 6, 8, ?

- A) 10
- B) 12
- C) 14
- D) 16

Answer: A

Explanation: The sequence increases by 2 each time:  $2 + 2 = 4$ ,  $4 + 2 = 6$ ,  $6 + 2 = 8$ . Next:  $8 + 2 = 10$ .

22. If  $3:5 = x:10$ , what is  $x$ ?

- A) 6
- B) 7
- C) 8
- D) 9

Answer: A

Explanation: Proportion:  $3/5 = x/10$ . Cross-multiply:  $3 \times 10 = 5 \times x$ , so  $30 = 5x$ ,  $x = 30 \div 5 = 6$ .

23. Find the HCF of 24 and 36.

- A) 6

B) 12

C) 18

D) 24

Answer: B

Explanation: Factors of 24: 1, 2, 3, 4, 6, 8, 12, 24; factors of 36: 1, 2, 3, 4, 6, 9, 12, 18, 36. HCF is 12.

24. What is the LCM of 6 and 9?

A) 18

B) 12

C) 15

D) 27

Answer: A

Explanation: LCM of 6 and 9 is  $6 \times 9 \div \text{HCF}(6,9) = 54 \div 3 = 18$ .

25. A shop sells pens at 3 for ₹12. How much for 9 pens?

A) 36

B) 40

C) 44

D) 48

Answer: A

Explanation: Cost per pen:  $12 \div 3 = 4$ . For 9 pens:  $9 \times 4 = 36$ .

26. Find the next number in the sequence: 5, 10, 15, 20, ?

A) 25

B) 30

C) 35

D) 40

Answer: A

Explanation: The sequence increases by 5 each time:  $5 + 5 = 10$ ,  $10 + 5 = 15$ , etc. Next:  $20 + 5 = 25$ .

27. If  $4:7 = 12:x$ , what is x?

A) 19

B) 20

C) 21

D) 22

Answer: C

Explanation: Proportion:  $\frac{4}{7} = \frac{12}{x}$ . Cross-multiply:  $4x = 7 \times 12$ , so  $4x = 84$ ,  $x = 84 \div 4 = 21$ .

28. Find the HCF of 15 and 25.

A) 5

B) 10

C) 15

D) 25

Answer: A

Explanation: Factors of 15: 1, 3, 5, 15; factors of 25: 1, 5, 25. HCF is 5.

29. What is the LCM of 8 and 12?

A) 24

B) 20

C) 16

D) 36

Answer: A

Explanation: LCM of 8 and 12 is  $8 \times 12 \div \text{HCF}(8,12) = 96 \div 4 = 24$ .

30. A number when divided by 3 gives 9. What is the number?

A) 24

B) 27

C) 30

D) 33

Answer: B

Explanation: Number =  $9 \times 3 = 27$ . Check:  $27 \div 3 = 9$ .

31. Find the next number in the sequence: 3, 6, 12, 24, ?

A) 36

B) 48

C) 60

D) 72



Answer: B

Explanation: Each number doubles:  $3 \times 2 = 6$ ,  $6 \times 2 = 12$ ,  $12 \times 2 = 24$ .  
Next:  $24 \times 2 = 48$ .

32. If  $5:2 = x:8$ , what is  $x$ ?

- A) 18
- B) 20
- C) 22
- D) 24

Answer: B

Explanation: Proportion:  $5/2 = x/8$ . Cross-multiply:  $5 \times 8 = 2 \times x$ , so  $40 = 2x$ ,  $x = 40 \div 2 = 20$ .

33. Find the HCF of 18 and 27.

- A) 6
- B) 9
- C) 12
- D) 15

Answer: B

Explanation: Factors of 18: 1, 2, 3, 6, 9, 18; factors of 27: 1, 3, 9, 27.  
HCF is 9.

34. What is the LCM of 10 and 15?

- A) 25
- B) 30
- C) 45
- D) 60

Answer: B

Explanation: LCM of 10 and 15 is  $10 \times 15 \div \text{HCF}(10,15) = 150 \div 5 = 30$ .

35. A shop sells books at 2 for ₹30. How much for 6 books?

- A) 90
- B) 80
- C) 70
- D) 60

Answer: A

Explanation: Cost per book:  $30 \div 2 = 15$ . For 6 books:  $6 \times 15 = 90$ .

36. Find the next number in the sequence: 7, 14, 21, 28, ?

A) 35

B) 40

C) 45

D) 50

Answer: A

Explanation: The sequence increases by 7 each time:  $7 + 7 = 14$ ,  $14 + 7 = 21$ , etc. Next:  $28 + 7 = 35$ .

37. If  $6:9 = x:18$ , what is x?

A) 12

B) 14

C) 16

D) 18

Answer: A

Explanation: Proportion:  $6/9 = x/18$ . Simplify:  $2/3 = x/18$ . Cross-multiply:  $2 \times 18 = 3x$ , so  $36 = 3x$ ,  $x = 36 \div 3 = 12$ .

38. Find the HCF of 20 and 30.

A) 10

B) 5

C) 15

D) 20

Answer: A

Explanation: Factors of 20: 1, 2, 4, 5, 10, 20; factors of 30: 1, 2, 3, 5, 6, 10, 15, 30. HCF is 10.

39. What is the LCM of 9 and 12?

A) 36

B) 24

C) 18

D) 48

Answer: A

Explanation: LCM of 9 and 12 is  $9 \times 12 \div \text{HCF}(9,12) = 108 \div 3 = 36$ .  
HCF is 3.

40. A number when multiplied by 4 gives 28. What is the number?

- A) 6
- B) 7
- C) 8
- D) 9

Answer: B

Explanation: Number =  $28 \div 4 = 7$ . Check:  $7 \times 4 = 28$ .

41. Find the next number in the sequence: 4, 8, 16, 32, ?

- A) 48
- B) 64
- C) 80
- D) 96

Answer: B

Explanation: Each number doubles:  $4 \times 2 = 8$ ,  $8 \times 2 = 16$ ,  $16 \times 2 = 32$ .  
Next:  $32 \times 2 = 64$ .

42. If  $2:3 = 8:x$ , what is  $x$ ?

- A) 12
- B) 14
- C) 16
- D) 18

Answer: A

Explanation: Proportion:  $2/3 = 8/x$ . Cross-multiply:  $2x = 3 \times 8$ , so  $2x = 24$ ,  
 $x = 24 \div 2 = 12$ .

43. Find the HCF of 12 and 18.

- A) 6
- B) 9
- C) 12
- D) 3

Answer: A

Explanation: Factors of 12: 1, 2, 3, 4, 6, 12; factors of 18: 1, 2, 3, 6, 9, 18. HCF is 6.

44. What is the LCM of 7 and 14?

- A) 14
- B) 21
- C) 28
- D) 35

Answer: A

Explanation: LCM of 7 and 14 is  $7 \times 14 \div \text{HCF}(7,14) = 98 \div 7 = 14$ . HCF is 7.

45. A shop sells pencils at 5 for ₹10. How much for 15 pencils?

- A) 30
- B) 25
- C) 20
- D) 15

Answer: A

Explanation: Cost per pencil:  $10 \div 5 = 2$ . For 15 pencils:  $15 \times 2 = 30$ .

46. Find the next number in the sequence: 10, 20, 30, 40, ?

- A) 50
- B) 55
- C) 60
- D) 65

Answer: A

Explanation: The sequence increases by 10 each time:  $10 + 10 = 20$ ,  $20 + 10 = 30$ , etc. Next:  $40 + 10 = 50$ .

47. If  $3:4 = x:12$ , what is x?

- A) 8
- B) 9
- C) 10
- D) 11

Answer: B

Explanation: Proportion:  $\frac{3}{4} = \frac{x}{12}$ . Cross-multiply:  $3 \times 12 = 4x$ , so  $36 = 4x$ ,  $x = 36 \div 4 = 9$ .

48. Find the HCF of 16 and 24.

- A) 8
- B) 6
- C) 4
- D) 12

Answer: A

Explanation: Factors of 16: 1, 2, 4, 8, 16; factors of 24: 1, 2, 3, 4, 6, 8, 12, 24. HCF is 8.

49. What is the LCM of 6 and 8?

- A) 24
- B) 12
- C) 18
- D) 36

Answer: A

Explanation: LCM of 6 and 8 is  $6 \times 8 \div \text{HCF}(6,8) = 48 \div 2 = 24$ .

50. A number when divided by 5 gives 7. What is the number?

- A) 30
- B) 35
- C) 40
- D) 45

Answer: B

Explanation: Number =  $7 \times 5 = 35$ . Check:  $35 \div 5 = 7$ .

51. Find the next number in the sequence: 2, 5, 8, 11, ?

- A) 14
- B) 15
- C) 16
- D) 17

Answer: A

Explanation: The sequence increases by 3 each time:  $2 + 3 = 5$ ,  $5 + 3 = 8$ , etc. Next:  $11 + 3 = 14$ .

52. If  $5:6 = 15:x$ , what is  $x$ ?

- A) 18
- B) 20
- C) 22
- D) 24

Answer: A

Explanation: Proportion:  $5/6 = 15/x$ . Cross-multiply:  $5x = 6 \times 15$ , so  $5x = 90$ ,  $x = 90 \div 5 = 18$ .

53. Find the HCF of 21 and 28.

- A) 7
- B) 14
- C) 21
- D) 28

Answer: A

Explanation: Factors of 21: 1, 3, 7, 21; factors of 28: 1, 2, 4, 7, 14, 28. HCF is 7.

54. What is the LCM of 12 and 15?

- A) 60
- B) 45
- C) 30
- D) 75

Answer: A

Explanation: LCM of 12 and 15 is  $12 \times 15 \div \text{HCF}(12,15) = 180 \div 3 = 60$ .

55. A shop sells apples at 4 for ₹20. How much for 12 apples?

- A) 60
- B) 50
- C) 40
- D) 30

Answer: A

Explanation: Cost per apple:  $20 \div 4 = 5$ . For 12 apples:  $12 \times 5 = 60$ .

56. Find the next number in the sequence: 9, 18, 27, 36, ?

- A) 45
- B) 50
- C) 55
- D) 60

Answer: A

Explanation: The sequence increases by 9 each time:  $9 + 9 = 18$ ,  $18 + 9 = 27$ , etc. Next:  $36 + 9 = 45$ .

57. If  $7:8 = x:24$ , what is  $x$ ?

- A) 20
- B) 21
- C) 22
- D) 23

Answer: B

Explanation: Proportion:  $7/8 = x/24$ . Cross-multiply:  $7 \times 24 = 8x$ , so  $168 = 8x$ ,  $x = 168 \div 8 = 21$ .

58. Find the HCF of 14 and 35.

- A) 7
- B) 14
- C) 5
- D) 10

Answer: A

Explanation: Factors of 14: 1, 2, 7, 14; factors of 35: 1, 5, 7, 35. HCF is 7.

59. What is the LCM of 10 and 12?

- A) 60
- B) 24
- C) 36
- D) 48

Answer: A

Explanation: LCM of 10 and 12 is  $10 \times 12 \div \text{HCF}(10,12) = 120 \div 2 = 60$ .

60. A number when multiplied by 3 gives 21. What is the number?

- A) 6
- B) 7
- C) 8
- D) 9

Answer: B

Explanation: Number =  $21 \div 3 = 7$ . Check:  $7 \times 3 = 21$ .

61. Find the next number in the sequence: 6, 12, 18, 24, ?

- A) 30
- B) 36
- C) 42
- D) 48

Answer: A

Explanation: The sequence increases by 6 each time:  $6 + 6 = 12$ ,  $12 + 6 = 18$ , etc. Next:  $24 + 6 = 30$ .

62. If  $4:5 = 16:x$ , what is  $x$ ?

- A) 20
- B) 22
- C) 24
- D) 26

Answer: A

Explanation: Proportion:  $4/5 = 16/x$ . Cross-multiply:  $4x = 5 \times 16$ , so  $4x = 80$ ,  $x = 80 \div 4 = 20$ .

63. Find the HCF of 27 and 36.

- A) 9
- B) 12
- C) 18
- D) 6

Answer: A



Explanation: Factors of 27: 1, 3, 9, 27; factors of 36: 1, 2, 3, 4, 6, 9, 12, 18, 36. HCF is 9.

64. What is the LCM of 15 and 20?

- A) 60
- B) 45
- C) 30
- D) 75

Answer: A

Explanation: LCM of 15 and 20 is  $15 \times 20 \div \text{HCF}(15,20) = 300 \div 5 = 60$ .

65. A shop sells oranges at 3 for ₹15. How much for 9 oranges?

- A) 45
- B) 40
- C) 35
- D) 30

Answer: A

Explanation: Cost per orange:  $15 \div 3 = 5$ . For 9 oranges:  $9 \times 5 = 45$ .

66. Find the next number in the sequence: 8, 16, 24, 32, ?

- A) 40
- B) 44
- C) 48
- D) 52

Answer: A

Explanation: The sequence increases by 8 each time:  $8 + 8 = 16$ ,  $16 + 8 = 24$ , etc. Next:  $32 + 8 = 40$ .

67. If  $5:7 = x:14$ , what is x?

- A) 10
- B) 11
- C) 12
- D) 13

Answer: A

Explanation: Proportion:  $\frac{5}{7} = \frac{x}{14}$ . Cross-multiply:  $5 \times 14 = 7x$ , so  $70 = 7x$ ,  $x = 70 \div 7 = 10$ .

68. Find the HCF of 24 and 32.

- A) 8
- B) 6
- C) 4
- D) 12

Answer: A

Explanation: Factors of 24: 1, 2, 3, 4, 6, 8, 12, 24; factors of 32: 1, 2, 4, 8, 16, 32. HCF is 8.

69. What is the LCM of 9 and 15?

- A) 45
- B) 30
- C) 60
- D) 75

Answer: A

Explanation: LCM of 9 and 15 is  $9 \times 15 \div \text{HCF}(9,15) = 135 \div 3 = 45$ .

70. A number when divided by 4 gives 8. What is the number?

- A) 28
- B) 32
- C) 36
- D) 40

Answer: B

Explanation: Number =  $8 \times 4 = 32$ . Check:  $32 \div 4 = 8$ .

71. Find the next number in the sequence: 5, 10, 20, 40, ?

- A) 60
- B) 80
- C) 100
- D) 120

Answer: B

Explanation: Each number doubles:  $5 \times 2 = 10$ ,  $10 \times 2 = 20$ ,  $20 \times 2 = 40$ .  
Next:  $40 \times 2 = 80$ .

72. If  $3:8 = 12:x$ , what is  $x$ ?

- A) 28
- B) 30
- C) 32
- D) 34

Answer: C

Explanation: Proportion:  $3/8 = 12/x$ . Cross-multiply:  $3x = 8 \times 12$ , so  $3x = 96$ ,  $x = 96 \div 3 = 32$ .

73. Find the HCF of 30 and 45.

- A) 15
- B) 10
- C) 5
- D) 20

Answer: A

Explanation: Factors of 30: 1, 2, 3, 5, 6, 10, 15, 30; factors of 45: 1, 3, 5, 9, 15, 45. HCF is 15.

74. What is the LCM of 8 and 10?

- A) 40
- B) 20
- C) 30
- D) 50

Answer: A

Explanation: LCM of 8 and 10 is  $8 \times 10 \div \text{HCF}(8,10) = 80 \div 2 = 40$ .

75. A shop sells bananas at 6 for ₹18. How much for 12 bananas?

- A) 36
- B) 30
- C) 24
- D) 18

Answer: A

Explanation: Cost per banana:  $18 \div 6 = 3$ . For 12 bananas:  $12 \times 3 = 36$ .

76. Find the next number in the sequence: 4, 7, 10, 13, ?

- A) 16
- B) 17
- C) 18
- D) 19

Answer: A

Explanation: The sequence increases by 3 each time:  $4 + 3 = 7$ ,  $7 + 3 = 10$ , etc. Next:  $13 + 3 = 16$ .

77. If  $2:5 = 10:x$ , what is  $x$ ?

- A) 25
- B) 20
- C) 15
- D) 10

Answer: A

Explanation: Proportion:  $2/5 = 10/x$ . Cross-multiply:  $2x = 5 \times 10$ , so  $2x = 50$ ,  $x = 50 \div 2 = 25$ .

78. Find the HCF of 18 and 24.

- A) 6
- B) 12
- C) 8
- D) 4

Answer: A

Explanation: Factors of 18: 1, 2, 3, 6, 9, 18; factors of 24: 1, 2, 3, 4, 6, 8, 12, 24. HCF is 6.

79. What is the LCM of 12 and 16?

- A) 48
- B) 36
- C) 24
- D) 60

Answer: A

Explanation: LCM of 12 and 16 is  $12 \times 16 \div \text{HCF}(12,16) = 192 \div 4 = 48$ .

80. A number when multiplied by 5 gives 35. What is the number?

- A) 6
- B) 7
- C) 8
- D) 9

Answer: B

Explanation: Number =  $35 \div 5 = 7$ . Check:  $7 \times 5 = 35$ .

### **Section 3: High Difficulty - Complex Patterns and Multi-Step Problems (Questions 81–100)**

81. Two bells ring at intervals of 6 and 8 seconds. After how many seconds will they ring together?

- A) 24
- B) 12
- C) 18
- D) 30

Answer: A

Explanation: Find LCM of 6 and 8:  $6 \times 8 \div \text{HCF}(6,8) = 48 \div 2 = 24$ . They ring together after 24 seconds.

82. A number when multiplied by 3 and increased by 12 gives 33. What is the number?

- A) 7
- B) 8
- C) 9
- D) 10

Answer: A

Explanation: Let  $x$  be the number. Then,  $3x + 12 = 33$ , so  $3x = 33 - 12 = 21$ ,  $x = 21 \div 3 = 7$ .

83. Find the next number in the sequence: 2, 6, 12, 20, ?

- A) 30

B) 32

C) 34

D) 36

Answer: A

Explanation: Differences increase by 2:  $6 - 2 = 4$ ,  $12 - 6 = 6$ ,  $20 - 12 = 8$ .  
Next difference: 10. So,  $20 + 10 = 30$ .

84. If the ratio of two numbers is 3:4 and their sum is 28, what is the smaller number?

A) 12

B) 14

C) 16

D) 18

Answer: A

Explanation: Let numbers be  $3x$  and  $4x$ . Then,  $3x + 4x = 28$ , so  $7x = 28$ ,  
 $x = 4$ . Smaller number:  $3 \times 4 = 12$ .

85. Find the HCF of 36 and 48.

A) 12

B) 18

C) 24

D) 6

Answer: A

Explanation: Factors of 36: 1, 2, 3, 4, 6, 9, 12, 18, 36; factors of 48: 1, 2, 3, 4, 6, 8, 12, 16, 24, 48. HCF is 12.

86. What is the LCM of 18 and 24?

A) 72

B) 48

C) 36

D) 60

Answer: A

Explanation: LCM of 18 and 24 is  $18 \times 24 \div \text{HCF}(18,24) = 432 \div 6 = 72$ .

87. A shop sells 3 kg of rice for ₹45 and 5 kg of wheat for ₹60. What is the cost of 9 kg of rice and 10 kg of wheat?

- A) 195
- B) 200
- C) 205
- D) 210

Answer: A

Explanation: Rice per kg:  $45 \div 3 = 15$ ; 9 kg rice:  $9 \times 15 = 135$ . Wheat per kg:  $60 \div 5 = 12$ ; 10 kg wheat:  $10 \times 12 = 120$ . Total:  $135 + 120 = 195$ .

88. Find the next number in the sequence: 3, 9, 18, 30, ?

- A) 45
- B) 50
- C) 52
- D) 54

Answer: A

Explanation: Differences increase by 3:  $9 - 3 = 6$ ,  $18 - 9 = 9$ ,  $30 - 18 = 12$ . Next difference: 15. So,  $30 + 15 = 45$ .

89. If the ratio of two numbers is 5:7 and their difference is 8, what is the larger number?

- A) 26
- B) 28
- C) 24
- D) 32

Answer: B

Explanation: Let numbers be  $5x$  and  $7x$ . Then,  $7x - 5x = 8$ , so  $2x = 8$ ,  $x = 4$ . Larger number:  $7 \times 4 = 28$ .

90. Two bells ring at intervals of 12 and 15 seconds. After how many seconds will they ring together?

- A) 60
- B) 45
- C) 30
- D) 75

Answer: A

Explanation: Find LCM of 12 and 15:  $12 \times 15 \div \text{HCF}(12,15) = 180 \div 3 = 60$ . They ring together after 60 seconds.

91. A number when multiplied by 4 and decreased by 10 gives 22. What is the number?

- A) 11
- B) 9
- C) 10
- D) 8

Answer: D

Explanation: Let  $x$  be the number. Then,  $4x - 10 = 22$ , so  $4x = 32$ ,  $x = 32 \div 4 = 8$ .

92. Find the next number in the sequence: 1, 4, 10, 22, ?

- A) 46
- B) 48
- C) 50
- D) 52

Answer: A

Explanation: Differences increase by doubling:  $4 - 1 = 3$ ,  $10 - 4 = 6$ ,  $22 - 10 = 12$ . Next difference: 24. So,  $22 + 24 = 46$ .

93. If the ratio of two numbers is 2:3 and their sum is 25, what is the larger number?

- A) 13
- B) 14
- C) 15
- D) 12

Answer: C

Explanation: Let numbers be  $2x$  and  $3x$ . Then,  $2x + 3x = 25$ , so  $5x = 25$ ,  $x = 5$ . Larger number:  $3 \times 5 = 15$ .

94. Find the HCF of 42 and 56.

- A) 14



- B) 7
- C) 28
- D) 21

Answer: A

Explanation: Factors of 42: 1, 2, 3, 6, 7, 14, 21, 42; factors of 56: 1, 2, 4, 7, 8, 14, 28, 56. HCF is 14.

95. What is the LCM of 20 and 25?

- A) 110
- B) 75
- C) 50
- D) 100

Answer: D

Explanation: LCM of 20 and 25 is  $20 \times 25 \div \text{HCF}(20,25) = 500 \div 5 = 100$ .

96. A shop sells 4 kg of sugar for ₹80 and 3 kg of rice for ₹60. What is the cost of 12 kg of sugar and 9 kg of rice?

- A) 422
- B) 420
- C) 402
- D) 270

Answer: B

Explanation: Sugar per kg:  $80 \div 4 = 20$ ; 12 kg sugar:  $12 \times 20 = 240$ . Rice per kg:  $60 \div 3 = 20$ ; 9 kg rice:  $9 \times 20 = 180$ . Total:  $240 + 180 = 420$

97. Find the next number in the sequence: 2, 5, 11, 23, ?

- A) 47
- B) 48
- C) 49
- D) 50

Answer: A

Explanation: Differences double:  $5 - 2 = 3$ ,  $11 - 5 = 6$ ,  $23 - 11 = 12$ . Next difference: 24. So,  $23 + 24 = 47$ .

98. If the ratio of two numbers is 4:5 and their difference is 10, what is the smaller number?

- A) 40
- B) 30
- C) 20
- D) 10

Answer: A

Explanation: Let numbers be  $4x$  and  $5x$ . Then,  $5x - 4x = 10$ , so  $x = 10$ .  
Smaller number:  $4 \times 10 = 40$ .

99. Two bells ring at intervals of 9 and 12 seconds. After how many seconds will they ring together?

- A) 36
- B) 24
- C) 18
- D) 48

Answer: A

Explanation: Find LCM of 9 and 12:  $9 \times 12 \div \text{HCF}(9,12) = 108 \div 3 = 36$ .  
They ring together after 36 seconds.

100. A number when multiplied by 5 and increased by 15 gives 50. What is the number?

- A) 7
- B) 8
- C) 9
- D) 10

Answer: A

Explanation: Let  $x$  be the number. Then,  $5x + 15 = 50$ , so  $5x = 50 - 15 = 35$ ,  $x = 35 \div 5 = 7$ .

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