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The Question Bank

Number series Questions for LIC AAO Pre, SBI PO Pre, IBPS PO Pre, SBI Clerk Mains and IBPS Clerk Mains Exams.

Number series

Directions: What will come in place of question mark (?) in the following series?

1. 1024 520 268 142 ? 47.5

A. 84 B. 82 C. 79 D. 88 E. None of these

2. 32 16.5 17.5 27.75 57.5 ?

A. 136.25 B. 142.25 C. 146.25 D. 156.25 E. None of these

3. 6 16 34 62 102 ?

A. 156 B. 132 C. 136 D. 142 E. None of these

4. 100 101 102 101 96 ? 66

A. 97 B. 85 C. 108 D. 64 E. None of these

5. 3 10 24 50 ? 170

A. 80 B. 82 C. 120 D. 121 E. None of these

6. 32 35 64 71 104 ? 152

A. 110 B. 114 C. 115 D. 125 E. None of these

7. 4 20 29 38 47 56 ?

A. 65 B. 64 C. 66 D. 62 E. None of these

8. 9 24 69 204 609 ?

A. 1818 B. 1828 C. 1827 D. 1824 E. None of these

9. 582 751 555 724 528 ?

A. 699 B. 702 C. 697 D. 695 E. None of these

10. 14 33 71 128 204 ?

A. 289 B. 298 C. 225 D. 256 E. None of these

11. 8 12 18 27 40.5 60.75 ?

A. 91.125 B. 88.125 C. 96.125 D. 101.125 E. None of these

12. 13 15 21 37 77 173 ?

A. 349 B. 359 C. 357 D. 397 E. None of these

13. 8648 8834 9022 9212 9404 9598 ?

A. 9754 B. 9774 C. 9668 D. 9794 E. None of these

14. 23 21 45 131 529 ? 15841

A. 1058 B. 1587 C. 2116 D. 2639 E. None of these

15. 64 88 152 162 174 ?

A. 200 B. 302 C. 202 D. 292 E. None of these

16. 43 47 56 81 130 ?

A. 215 B. 251 C. 289 D. 231 E. None of these

17. 204 205 203 209 185 305 ?

A. 428 B. 484 C. 416 D. 512 E. None of these

18. 1022 1009 983 944 892 ?

A. 798 B. 812 C. 815 D. 827 E. None of these

19. 1025 1024 1019 1005 975 ?

A. 920 B. 925 C. 905 D. 912 E. None of these

20. 196 201 208.5 218.5 231 ?

A. 245 B. 248 C. 250 D. 246 E. None of these

21. 489, 510, 516, 528, 543, 555, ?

A. 569 B. 570 C. 573 D. 568 E. None of these

22. 81, 91, 109, 146, 221, 351, ?

A. 578 B. 582 C. 591 D. 576 E. None of these

23. 540, 538, 534, 526, 510, ?, 414

A. 470 B. 478 C. 474 D. 472 E. None of these

24. 32, 24, 20, 18, 17, ?

A. 16.5 B. 8.5 C. 12.5 D. 18.5 E. None of these

25. 1, 3, 9, 39, 249, 2559, ?

A. 28561 B. 30458 C. 32589 D. 35289 E. None of these

26. 704, 88, 22, 8.25, ?

A. 4.125 B. 6.50 C. 6.25 D. 5.25 E. None of these

27. 2, 10, 30, 68, 130, ?

A. 221 B. 230 C. 222 D. 225 E. None of these

28. 1, 4, 15, 28, 57, 88, ?

A. 133 B. 143 C. 157 D. 147 E. None of these

29. 122, 171, 228, 293, 366, ?

A. 450 B. 455 C. 447 D. 465 E. None of these

30. 13, 15, 19, 27, 43, ?

A. 74 B. 72 C. 73 D. 75 E. None of these

31. 25 33 54 99 179 ?

A. 243 B. 240 C. 285 D. 305 E. None of these

32. 384 377 356 321 ? 209

A. 328 B. 384 C. 284 D. 272 E. None of these

33. 5 9 16 32 75 ?

A. 199 B. 200 C. 204 D. 212 E. None of these

34. 3 16 45 96 175 ?

A. 290 B. 285 C. 288 D. 310 E. None of these

35. 3 11 29 67 145 ?

A. 198 B. 303 C. 185 D. 309 E. None of these

36. 2, 12, 36, 80, 150, 252, ?

A. 576 B. 392 C. 354 D. 382 E. None of these

37. 1, 5, 19, 81, 411, ?

A. 1651 B. 2884 C. 1792 D. 2473 E. None of these

38. 9, 20, 36, 78, 148, 306, ?

A. 612 B. 638 C. 600 D. 564 E. None of these

39. 17, 33, 64, 124, 240, 464, ?

A. 946 B. 928 C. 986 D. 896 E. None of these

40. 15 19 83 119 631 ?

A. 712 B. 693 C. 683 D. 731 E. None of these

41. 15 22 40 75 133 ?

A. 243 B. 220 C. 253 D. 245 E. None of these

42. 24 31 52 87 136 ?

A. 183 B. 189 C. 177 D. 199 E. None of these

43. 15 16 31 94 375 1876 ?

A. 12256 B. 11056 C. 10244 D. 11256 E. None of these

44. 15 8 9 ? 32 82.5 250.5

A. 12 B. 15 C. 25 D. 26 E. None of these

45. 1 9 61 497 4981 ?

A. 56108 B. 58407 C. 59415 D. 59785 E. 57108

46. 2 5 23 119 ? 4079

A. 611 B. 659 C. 451 D. 320 E. 560

47. 3 4 14 73 515 ?

A. 4644 B. 4678 C. 4640 D. 3446 E. 3648

48. 7 16 30 62 122 ?

A. 242 B. 240 C. 246 D. 244 E. 248

49. 11043 11056 11045 11054 11047 ?

A. 11051 B. 11049 C. 10521 D. 11056 E. 11052

50. 256 128 192 480 ? 7560

A. 1824 B. 1680 C. 1856 D. 1632 E. 1864

Correct Answers

1	2	3	4	5	6	7	8	9	10
C	C	A	B	C	C	A	D	C	E
11	12	13	14	15	16	17	18	19	20
A	D	D	D	C	B	E	D	A	D
21	22	23	24	25	26	27	28	29	30
B	D	B	A	C	A	C	B	C	D
31	32	33	34	35	36	37	38	39	40
D	D	A	C	B	B	B	C	D	D
41	42	43	44	45	46	47	48	49	50
B	D	E	B	D	B	C	C	E	B

Explanations:

1.

Series Pattern	Series	
1024	1024	
1024 ÷ 2 + 8	520	
520 ÷ 2 + 8	268	
268 ÷ 2 + 8	142	
142 ÷ 2 + 8	**79**	✓
79 ÷ 2 + 8	47.5	

Hence, option C is correct.

2.

Series Pattern	Given Series	
32	32	✓
$32 \times \frac{1}{2} + \frac{1}{2} = 16.5$	16.5	
$16.5 \times 1 + 1 = 17.5$	17.5	
$17.5 \times \frac{3}{2} + \frac{3}{2} = 27.75$	27.75	
$27.75 \times 2 + 2 = 57.5$	57.5	
$57.5 \times \frac{5}{2} + \frac{5}{2} = 146.25$	**146.25**	✓

Therefore, option C is correct.

3.

Series Pattern	Given Series	
6	6	
6 + 2 × 5	16	
16 + 3 × 6	34	
34 + 4 × 7	62	
62 + 5 × 8	102	
102 + 6 × 9	**156**	✓

Hence, option (A) is correct.

4.

Series Pattern	Given Series	
100 – $(2)^2$ + 5	101	
101 – $(3)^2$ + 10	102	
102 – $(4)^2$ + 15	101	
101 – $(5)^2$ + 20	96	
96 – $(6)^2$ + 25	**85**	✓
85 – $(7)^2$ + 30	66	

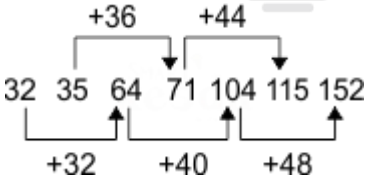
Hence, option B is correct.

5.

Series Pattern	Given Series	
$2^2 - 1$	3	
$3^2 + 1$	10	
$5^2 - 1$	24	
$7^2 + 1$	50	
$11^2 - 1$	**120**	✓
$13^2 + 1$	170	

Hence, option C is correct.

6.



Hence, option (C) is correct.

7.

Series Pattern	Given Series	
4	4	
4 × 4 + 4 = 20	20	
4 × 6 + 5 = 29	29	
4 × 8 + 6 = 38	38	
4 × 10 + 7 = 47	47	
4 × 12 + 8 = 56	56	
4 × 14 + 9 = 65	**65**	✓

Hence, option (A) is correct.

8.

Series Pattern	Given Series
9	9
9 + 15 = 24	24
24 + 15 × 3 = 69	69
69 + 15 × 3 × 3 = 204	204
204 + 15 × 3 × 3 × 3 = 609	609
609 + 15 × 3 × 3 × 3 × 3 = 1824	**1824** ✓

Hence, option (D) is correct.

9.

Series Pattern	Given Series
582	582
582 + 169 = 751	751
751 – 196 = 555	555
555 + 169 = 724	724
724 – 196 = 528	528
528 + 169 = 697	**697** ✓

Hence, option (C) is correct.

10.

Series Pattern	Given Series
14	14
14 + 19 = 33	33
33 + 19 × 2 = 71	71
71 + 19 × 3 = 128	128
128 + 19 × 4 = 204	204
204 + 19 × 5 = 299	**299** ✓

Hence, option (E) is correct.

11.

Series Pattern	Given Series
8	8
8 × 1.5	12
12 × 1.5	18
18 × 1.5	27
27 × 1.5	40.5
40.5 × 1.5	60.75
60.75 × 1.5	**91.125** ✓

Hence, option (A) is correct.

12.

Series Pattern	Given Series	
13	13	
$13 + 2 \times 1 = 15$	15	
$13 + 2^2 \times 2 = 21$	21	
$13 + 2^3 \times 3 = 37$	37	
$13 + 2^4 \times 4 = 77$	77	
$13 + 2^5 \times 5 = 173$	173	
$13 + 2^6 \times 6 = 397$	**397**	✓

Hence, option (D) is correct.

13.

Series Pattern	Given Series	
$93^2 - 1$	8648	
$94^2 - 2$	8834	
$95^2 - 3$	9022	
$96^2 - 4$	9212	
$97^2 - 5$	9404	
$98^2 - 6$	9598	
$99^2 - 7$	**9794**	✓

Hence, option (D) is correct.

14.

Series Pattern	Given Series	
23	23	
$23 \times 1 - 2 = 21$	21	
$21 \times 2 + 3 = 45$	45	
$45 \times 3 - 4 = 131$	131	
$131 \times 4 + 5 = 529$	529	
$529 \times 5 - 6 = 2639$	**2639**	✓
$2639 \times 6 + 7 = 15841$	15841	

Hence, option (D) is correct.

15.

Series Pattern	Given Series
64	64
64 + (6 × 4) = 88	88
88 + (8 × 8) = 152	152
152 + (1 × 5 × 2) = 162	162
162 + (1 × 6 × 2) = 174	174
174 + (1 × 7 × 4) = 202	**202** ✓

Hence, option (C) is correct.

16.

Series Pattern	Given Series
43	43
$43 + 2^2 = 47$	47
$47 + 3^2 = 56$	56
$56 + 5^2 = 81$	81
$81 + 7^2 = 130$	130
$130 + 11^2 = 164$	**251** ✓

Hence, option (B) is correct.

17.

Series Pattern	Given Series
204	204
204 + 1 = 205	205
205 – (1 × 2) = 203	203
203 + (1 × 2 × 3) = 209	209
209 – (1 × 2 × 3 × 4) = 185	185
185 + (1 × 2 × 3 × 4 × 5) = 305	305
305 – (1 × 2 × 3 × 4 × 5 × 6) = – 415	**– 415** ✓

Hence, option (E) is correct.

18.

Series Pattern	Given Series
1022	1022
1022 – 13 = 1009	1009
1009 – 13 × 2 = 983	983
983 – 13 × 3 = 944	944
944 – 13 × 4 = 892	892
892 – 13 × 5 = 827	**827** ✓

Hence, option (D) is correct.

19.

Series Pattern	Given Series	
1025	1025	
$1025 - (1^2) = 1024$	1024	
$1024 - (1^2 + 2^2) = 1019$	1019	
$1019 - (1^2 + 2^2 + 3^2) = 1005$	1005	
$1005 - (1^2 + 2^2 + 3^2 + 4^2) = 975$	975	
$975 - (1^2 + 2^2 + 3^2 + 4^2 + 5^2) = 920$	**920**	✓

Hence, option (A) is correct.

20.

Series Pattern	Given Series	
196	196	
$196 + 5 \times 1 = 201$	201	
$201 + 5 \times 1.5 = 208.5$	208.5	
$208.5 + 5 \times 2 = 218.5$	218.5	
$218.5 + 5 \times 2.5 = 231$	231	
$231 + 5 \times 3 = 246$	**246**	✓

Alternate Solution:-

As we can see the difference between the numbers are 5 , 7.5, 10, 12.5 respectively and it is in AP with common difference 2.5. So to get the last term we need to add (12.5 + 2.5) = 15. So the last term will be 231 + 15 =246

Hence, option (D) is correct.

21.

Series Pattern	Given Series	
489	489	
$489 + (4 + 8 + 9) = 510$	510	
$510 + (5 + 1 + 0) = 516$	516	
$516 + (5 + 1 + 6) = 528$	528	
$528 + (5 + 2 + 8) = 543$	543	
$543 + (5 + 4 + 3) = 555$	555	
$555 + (5 + 5 + 5) = 570$	**570**	✓

Hence, option (B) is correct.

22.

Series Pattern	Given Series	
81	81	
$81 + (1^3 + 8 + 1) = 91$	91	
$91 + (2^3 + 9 + 1) = 109$	109	
$109 + (3^3 + 1 + 0 + 9) = 146$	146	
$146 + (4^3 + 1 + 4 + 6) = 221$	221	
$221 + (5^3 + 2 + 2 + 1) = 351$	351	
$351 + (6^3 + 3 + 5 + 1) = 576$	**576**	✓

Hence, option (D) is correct.

23.

Series Pattern	Given Series	
540	540	
540 – 2 = 538	538	
538 – 4 = 534	534	
534 – 8 = 526	526	
526 – 16 = 510	510	
510 – 32 = 478	**478**	✓
478 – 64 = 414	414	

Hence, option (B) is correct.

24.

Series Pattern	Given Series	
32	32	
32 ÷ 2 + 8	24	
24 ÷ 2 + 8	20	
20 ÷ 2 + 8	18	
18 ÷ 2 + 8	17	
17 ÷ 2 + 8	**16.5**	✓

Hence, option (A) is correct.

25.

Series Pattern	Given Series	
1	1	
$1 + 2 = 3$	3	
$3 + 2 \times 3 = 9$	9	
$9 + 2 \times 3 \times 5 = 39$	39	
$39 + 2 \times 3 \times 5 \times 7 = 249$	249	
$249 + 2 \times 3 \times 5 \times 7 \times 11 = 2559$	2559	
$2559 + 2 \times 3 \times 5 \times 7 \times 11 \times 13 = 32589$	**32589**	✓

Hence, option (C) is correct.

26.

Series Pattern	Given Series	
704	704	
704 × (1/8) = 88	88	
88 × (2/8) = 22	22	
22 × (3/8) = 8.25	8.25	
8.25 × (4/8) = 4.125	**4.125**	✓

Hence, option (A) is correct.

27.

Series Pattern	Given Series	
$1^3 + 1 = 2$	2	
$2^3 + 2 = 10$	10	
$3^3 + 3 = 30$	30	
$4^3 + 4 = 68$	68	
$5^3 + 5 = 130$	130	
$6^3 + 6 = 222$	**222**	✓

Hence, option (C) is correct.

28.

Series Pattern	Given Series	
1	1	
$1 + (2^2 - 1) = 4$	4	
$4 + (3^2 + 2) = 15$	15	
$15 + (4^2 - 3) = 28$	28	
$28 + (5^2 + 4) = 57$	57	
$57 + (6^2 - 5) = 88$	88	
$88 + (7^2 + 6) = 143$	**143**	✓

Hence, option (B) is correct.

29.

Series Pattern	Given Series	
$11^2 + 1 = 122$	122	
$13^2 + 2 = 171$	171	
$15^2 + 3 = 228$	228	
$17^2 + 4 = 293$	293	
$19^2 + 5 = 366$	366	
$21^2 + 6 = 447$	**447**	✓

Hence, option (C) is correct.

30.

Series Pattern	Given Series	
13	13	
13 + 2 = 15	15	
15 + 2^2 = 19	19	
19 + 2^3 = 27	27	
27 + 2^4 = 43	43	
43 + 2^5 = 75	**75**	✓

Hence, option (D) is correct.

31.

Series I : 25 33 54 99 179 **?**
Series II : 8 21 45 80 **?**
Series III: 13 24 35 **?**
Series IV: 11 11 11
0 0

Clearly, the pattern in series III is +11.
So, the missing term in series III = 35 + 11 = 46;
∴ missing term in series II = 80 + 46 = 126;
∴ missing term in series I = 126 + 179 = 305.

Finally the series will become as follows:

Series I :25 33 54 99 179 **305**
Series II : 8 21 45 80 **126**
Series III: 13 24 35 **46**
Series IV: 11 11 11
0 0

Hence, option D is correct.

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32. **Approach I:**

Series Pattern	Given Series	
384	384	
384 – **7** (=1×7) = 377	377	
377 – **21** (=3×7) = 356	356	
356 – **35** (=5×7) = 321	321	
321 – **49** (=7×7) = **272**	**272**	✓
272 – **63** (=9×7) = 209	209	

Approach II: Triangular Method

Series I : 384 377 356 321 **?** 209
Series II : –7 –21 –35 **?** **?**
Series III : –14 –14 –14 –14
Series IV : 0 0

Clearly, the pattern in series II is –14. So, the missing term in series II = –14 – 35 = –49; and the next missing term in series II = –14 – 49 = –63; ∴ missing term in series I = 321 – 49 = 272. Finally the series will become as follows:

Series I : 384 377 356 321 **272** 209
Series II : –7 –21 –35 **–49** **–63**
Series III : –14 –14 –14 –14
Series IV : 0 0 0

Hence, option D is correct.

33.

Series I : 5 9 16 32 75 **?**
Series II : 4 7 16 43 **?**
Series III : 3 9 27 **?**
Series IV : ×3 ×3 ×3

Clearly, the pattern in series III is multiples of 3.
So, the missing term in series III = 27 × 3 = 81
∴ missing term in series II = 43 + 81 = 124;
∴ missing term in series I = 75 + 124 = 199. Finally the series become as follows:

Series I : 5 9 16 32 75 **199**
Series II : 4 7 16 43 **124**
Series III : 3 9 27 **81**
Series IV : ×3 ×3 ×3

Hence, option A is correct.

34.

Series Pattern	Given Series	
$2^2 \times 1 - 1$	3	
$3^2 \times 2 - 2$	16	
$4^2 \times 3 - 3$	45	
$5^2 \times 4 - 4$	96	
$6^2 \times 5 - 5$	175	
$7^2 \times 6 - 6$	**288**	✓

Hence, option C is correct.

35.

Series Pattern	Given Series
3	3
3 × 2 + 5	11
11 × 2 + 7	29
29 × 2 + 9	67
67 × 2 + 11	145
145 × 2 + 13	**303** ✓

Hence, option B is correct.

36.

Series Pattern	Series
$1^2 + 1^3$	2
$2^2 + 2^3$	12
$3^2 + 3^3$	36
$4^2 + 4^3$	80
$5^2 + 5^3$	150
$6^2 + 6^3$	252
$7^2 + 7^3$	**392** ✓

Hence, option B is correct.

37.

Series Pattern	Series
1	1
(1 × 2) + 3	5
(5 × 3) + 4	19
(19 × 4) + 5	81
(81 × 5) + 6	411
(411 × 6) + 7	**2473** ✓

Hence, option D is correct.

38.

Series Pattern	Series
9	9
9 × 2 + 2	20
20 × 2 – 4	36
36 × 2 + 6	78
78 × 2 – 8	148
148 × 2 + 10	306
306 × 2 – 12	**600** ✓

Hence, option C is correct.

39. As series begins with 17, the pattern followed is;

Series Pattern	Series
17	17
2 × 17 – 1	33
2 × 33 – 2	64
2 × 64 – 4	124
2 × 124 – 8	240
2 × 240 – 16	464
2 × 464 – 32	**896** ✓

Hence, option D is correct.

40.

Series Pattern	Given Series
15	15
15 + 2^2 = 19	19
19 + 4^3 = 83	83
83 + 6^2 = 119	119
119 + 8^3 = 631	631
631 + 10^2 = **731**	**731** ✓

Hence, option D is correct.

41.

Series I : 15 22 40 75 133 **?**
Series II : +7 +18 +35 +58 **?**
Series III: +11 +17 +23 **?**
Series IV: +6 +6 +6
0 0

Clearly, the pattern of series III is that '6' is added to get the next number. So, the missing term in series III is (23 + 6) = 29; ∴ missing term in series II is (58 + 29) = 87; ∴ missing term in series I is (87 + 133) = 220. Finally the series will become as follows:

Series I : 15 22 40 75 133 **220**
Series II : +7 +18 +35 +58 **+87**
Series III : +11 +17 +23 **+29**
Series IV : +6 +6 +6
0 0

Hence, option B is correct.

42.

Series Pattern	Given Series	
24	24	
24 + **7** (=7×1) = 31	31	
31 **+ 21** (=7×3) = 52	52	
52 **+ 35** (=7×5) = 87	87	
87 **+ 49** (=7×7) = 136	136	
136 **+ 63** (=7×9) = **199**	**199**	✓

Hence, the option D is correct.

43.

Series Pattern	Given Series	
15	15	
15 **× 1 + 1** = 16	16	
16 **× 2 – 1** = 31	31	
31 **× 3 + 1 =** 94	94	
94 **× 4 – 1** = 375	375	
375 **× 5 + 1 =** 1876	1876	
1876 **× 6 – 1 =** 11255	**11255**	✓

Hence, the option E is correct.

44.

Series Pattern	Given Series	
15	15	
$15 \times \frac{1}{2} + \frac{1}{2} = 8$	8	
$8 \times 1 + 1 = 9$	9	
$9 \times \frac{3}{2} + \frac{3}{2} = 15$	15	✓
$15 \times 2 + 2 = 32$	32	
$32 \times \frac{5}{2} + \frac{5}{2} = 82.5$	82.5	
$82.5 \times 3 + 3 = 250.5$	250.5	

Hence, the option B is correct.

45.

Series Pattern	Given Series	
1	1	
1 × 4 + 5	9	
9 × 6 + 7	61	
61 × 8 + 9	497	
497 × 10 + 11	4981	
4981 × 12 + 13	**59785**	✓

Hence, option D is correct.

46.

Series Pattern	Given Series	
2	2	
$2 \times 2 + 1^3$	5	
$5 \times 3 + 2^3$	23	
$23 \times 4 + 3^3$	119	
$119 \times 5 + 4^3$	**659**	✓
$320 \times 6 + 5^3$	4079	

Hence, option B is correct.

47.

Series Pattern	Given Series	
3	3	
3 × 1 +1	4	
4 × 3 + 2	14	
14 × 5 + 3	73	
73 × 7 + 4	515	
515 × 9 + 5	**4640**	✓

Hence, option C is correct.

48.

Series Pattern	Series	
9	9	
9 × 2 + 2	20	
20 × 2 – 4	36	
36 × 2 + 6	78	
78 × 2 – 8	148	
148 × 2 + 10	306	
306 × 2 – 12	**600**	✓

Hence, option C is correct.

49.

Series Pattern	Given Series	
11043	11043	
11043 + 13	11056	
11056 – 11	11045	
11045 + 9	11054	
11054 – 7	11047	
11047 + 5	**11052**	✓

Hence, option E is correct.

50.

Series Pattern	Given Series	
256	256	
256 × 0.5	128	
128 × 1.5	192	
192 × 2.5	480	
480 × 3.5	**1680**	✓
1680 × 4.5	7560	

Hence, option B is correct.