

10. In each of the following numbers, replace * by the smallest number to make it divisible by 11:				
(a) 26*5	(b) 39*43	(c) 86*72		
(d) 467*91	(e) 1723*4	(f) 9*8071		
11. Find the common factors of :				
(a) 20, 28	(b) 15, 25	(c) 35, 50		
(d) 56, 120	(e) 4, 8, 12	(f) 5, 15, 25		
12. Find first three common multiples of :				
(a) 6, 8	(b) 12, 18	(c) 16, 18, 24		
13. Give the prime factorization of each of the following numbers:				
(a) 12	(b) 18	(c) 48	(d) 56	(e) 90
(f) 136	(g) 252	(h) 420	(i) 637	(j) 945
(k) 1224	(l) 1323	(m) 8712	(n) 9317	(o) 1035
(p) 1197	(q) 4641	(r) 4335	(s) 2907	(t) 13915
14. Find, by inspection, the HCF of the following pairs of numbers:				
(a) 6, 9	(b) 8, 12	(c) 10, 15	(d) 16, 24	
(e) 30, 40	(f) 22, 33	(g) 11, 15	(h) 13, 8	
15. Find the HCF by finding factors:				
(a) 9, 12	(b) 10, 25	(c) 35, 49	(d) 4, 6, 8	
(e) 6, 9, 15	(f) 8, 12, 16	(g) 18, 24, 32		
Using Euclid's division algorithm, find the HCF of (using the division method)				
16. (a) 58, 70	(b) 399, 437	(c) 390, 663		
(d) 856, 936	(e) 837, 1134	(f) 504, 5292		
(g) 775, 1800	(h) 7625, 8175	(i) 1020, 11594		
(j) 5610, 10465	(k) 12350, 6845	(l) 10568, 9247		
(m) 3536, 33150	(n) 1965, 2096	(o) 2241, 2324		
17. (a) 256, 442, 940	(b) 192, 576, 1760			
(c) 639, 873, 747	(d) 612, 816, 448			
(e) 176, 1100, 4444	(f) 808, 568, 1112			
(g) 432, 1134, 1347	(h) 345, 726, 531			
(i) 658, 940, 1128	(j) 754, 1508, 1972			
(k) 391, 425, 527	(l) 1794, 2346, 4761			
18. (a) 1233, 726, 531, 345				
(b) 1326, 3094, 4420, 5577				
19. Which of the following numbers are co-prime?				
(a) 18, 35	(b) 15, 37	(c) 17, 68	(d) 81, 16	
(e) 59, 97	(f) 30, 415	(g) 216, 215	(h) 161, 192	
(i) 343, 432	(j) 512, 945	(k) 385, 621	(l) 847, 1014	
20. Find, by inspection, the LCM of each pair of numbers:				
(a) 2, 4	(b) 3, 6	(c) 4, 8	(d) 6, 12	
(e) 5, 10	(f) 9, 3	(g) 20, 10	(h) 6, 10	
(i) 6, 16	(j) 12, 16	(k) 10, 15	(l) 12, 18	
Find the LCM of the numbers by division:				
21. (a) 160, 100	(b) 12, 18, 90	(c) 45, 35, 21		
(d) 21, 63, 105	(e) 64, 96, 112			
22. (a) 15, 45, 125, 225	(b) 44, 126, 198, 280			
(c) 12, 36, 16, 24, 32	(d) 4, 6, 8, 12, 18, 90			
(e) 16, 90, 91, 280, 455				
Using prime factorisation, find the HCF and LCM of:				
23. (a) 4, 6	(b) 6, 9	(c) 8, 12	(d) 4, 22	
(e) 4, 26	(f) 6, 21	(g) 6, 27	(h) 8, 28	
(i) 10, 25	(j) 15, 25	(k) 25, 80	(l) 42, 63	
(m) 60, 75	(n) 45, 30	(o) 45, 75	(p) 54, 81	

(q) 64, 80	(r) 84, 98	(s) 64, 80	(t) 30, 105
(u) 58, 174	(v) 72, 126	(w) 75, 120	(x) 110, 88
24. (a) 165, 275	(b) 480, 720	(c) 140, 196	
(d) 352, 192	(e) 420, 360	(f) 204, 255	
(g) 117, 221	(h) 234, 572	(i) 145, 232	
(j) 693, 1078	(k) 861, 1353	(l) 2923, 3239	
25. (a) 8, 16, 14	(b) 10, 12, 36	(c) 12, 15, 21	
(d) 12, 36, 48	(e) 25, 40, 60	(f) 45, 84, 90	
(g) 54, 60, 90	(h) 13, 39, 65	(i) 12, 18, 20	
(j) 36, 60, 72	(k) 25, 30, 40	(l) 42, 36, 21	
(m) 26, 14, 91	(n) 17, 23, 29	(o) 24, 36, 40	
26. (a) 56, 42, 140	(b) 21, 63, 105	(c) 36, 40, 126	
(d) 21, 27, 189	(e) 30, 72, 432	(f) 44, 121, 132	
(g) 72, 108, 180	(h) 84, 120, 138	(i) 45, 125, 225	
(j) 106, 159, 371	(k) 144, 252, 630	(l) 144, 180, 384	
27. (a) 240, 320, 360	(b) 128, 136, 512		
(c) 540, 315, 360	(d) 216, 324, 1350		
(e) 1197, 5320, 4389	(f) 21, 28, 36, 45		
(g) 16, 28, 40, 77	(h) 28, 36, 45, 60		
(i) 36, 60, 84, 90	(j) 48, 64, 72, 96, 108		
28. For each pair of numbers, verify that their product = (HCF \times LCM).			
(a) 87, 145	(b) 186, 403	(c) 490, 1155	
29. Find the simplest form of:			
(a) $\frac{161}{207}$	(b) $\frac{517}{799}$	(c) $\frac{296}{481}$	(d) $\frac{1095}{1168}$
30. Find the greatest number that will divide 24 and 36 without leaving a remainder.			
31. Find the greatest number that will divide 22, 33 and 44 without leaving a remainder.			
32. Find the greatest number that will divide 33 and 45 leaving a remainder 9 in each case.			
33. What is the largest number that will divide 61, 33 and 75 leaving a remainder in each case?			
34. Find the greatest number that will divide 39, 52 and 65 leaving remainders 3, 4 and 5 respectively.			
35. Find the least number which when divided by 12 and 18, leaves no remainder.			
36. Find the least number which is exactly divisible by each of the numbers 6, 15 and 18.			
37. Find the least number which when divided by 15 and 25, leaves 1 as remainder in each case.			
38. Find the least number which when divided by 18 and 12, leaves 5 as remainder in each case.			
39. The product of two numbers is 48 and their HCF is 2. Find their LCM.			
40. The product of two numbers is 875 and their HCF is 5. Find their LCM.			
41. The product of two numbers is 108 and their LCM is 36. Find their HCF.			
42. The product of two numbers is 216 and their LCM is 36. Find their HCF.			
43. The HCF of two numbers is 3 and their LCM is 36. If one of the numbers is 12, find the other number.			
44. The HCF of two numbers is 8 and their LCM is 96. If one of the numbers is 24, find the other number.			

1. Number System

Exercise 1A

- Write the number between 3456 and 3466.
- Write the numeral for each of the following numbers:
 - Nine thousand eighteen
 - Fifty-four thousand seventy-three
 - Three lakh two thousand five hundred six
 - Twenty lakh ten thousand eight
 - Six crore five lakh fifty-seven
 - Two crore two lakh two thousand two hundred two
 - Twelve crore twelve lakh twelve thousand twelve
 - Fifteen crore fifty lakh twenty thousand sixty-eight
- Write each of the following numbers in words:
 - 63,005
 - 7,07,075
 - 34,20,019
 - 3,05,09,012
 - 5,10,03,604
 - 6,18,05,008
 - 19,09,09,900
 - 6,15,30,807
 - 6,60,60,060
- Write each of the following numbers in expanded form:
 - 15,768
 - 3,08,927
 - 24,05,609
 - 5,36,18,493
 - 6,06,06,006
 - 9,10,10,510
- Write the corresponding numeral for each of the following:
 - $6 \times 10000 + 2 \times 1000 + 5 \times 100 + 8 \times 10 + 4 \times 1$
 - $5 \times 10000 + 8 \times 1000 + 1 \times 100 + 6 \times 10 + 2 \times 1$
 - $2 \times 10000 + 5 \times 1000 + 7 \times 100 + 9 \times 10 + 5 \times 1$
 - $3 \times 1000000 + 4 \times 100000 + 6 \times 1000 + 5 \times 100$
- Write the number coming just before and coming after the given number:
 - 42678
 - 998866
 - 124680
 - 87654
- Write the next three whole numbers after 30999.
- Write the three whole numbers occurring just before 10001.
- How many whole numbers are there between 1032 and 1209?
- Insert commas suitably and write the names according to Indian System of Numeration and International System of Numeration:
 - 87595762
 - 8546283
 - 99900046
 - 98432701
 - 78921092
 - 7452283
- Arrange the following numbers in ascending order:
 - 878787877, 696969696, 9996655, 8790001
 - 12345789, 21345689, 113456789, 223456789
 - 19000919, 192000009, 191900009, 10999909
 - 223344556, 3000000, 209999999, 222998877
- Arrange the following numbers in descending order:
 - 787878787, 969696966, 55566699, 78900002
 - 98764321, 987654312, 98765311, 987654322
 - 919000091, 190000092, 90009191, 999999901
 - 778899222, 999999902, 9000000, 778899221
- Write all the possible numbers of three digits using 2, 5 and 1.

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(b) Write all the possible three-digit numbers using 3, 4 and 6.

(c) Write all the possible numbers of three digits using 8, 9 and 7.

14. (a) Write the greatest number of 4 digits using 1, 0, 9 and 2.

(b) Write the greatest five-digit number using 9, 1, 0, 3 and 1.

(c) Write the greatest number of six digits using 8, 9, 6, 5, 0 and 4.

15. Write the successor of:

(a) 2540801 **(b)** 9999 **(c)** 50904 **(d)** 61639

(e) 687890 **(f)** 5386700 **(g)** 6475999 **(h)** 9999999

16. Write the predecessor of:

(a) 97 **(b)** 10000 **(c)** 36900 **(d)** 7684320

(e) 1566391 **(f)** 2456800 **(g)** 100000 **(h)** 1000000

Exercise 1B

1. Express each of the following as a Roman numeral:

(a) 43 **(b)** 54 **(c)** 61 **(d)** 73 **(e)** 81 **(f)** 91

(g) 95 **(h)** 99 **(i)** 105 **(j)** 114 **(k)** 164 **(l)** 195

(m) 226 **(n)** 341 **(o)** 475 **(p)** 596 **(q)** 611 **(r)** 759

2. Write each of the following as a Hindu-Arabic numeral:

(a) XXXIV **(b)** XLV **(c)** LIV **(d)** LXIV

(e) XCI **(f)** XCVI **(g)** CXI **(h)** CLIV

(i) CCXIV **(j)** CCCLXV **(k)** CDXIV **(l)** CDLXIV

(m) DVI **(n)** DCCXLVI

3. Show that each of the following is meaningless Give reason in each case.

(a) VC **(b)** IL **(c)** VII **(d)** IXX

Exercise 1C

Add:

1. (a) 34120 + 45230 **(b)** 62507 + 4092

(c) 40065 + 38713 **(d)** 87654 + 321

(e) 80704 + 3203 **(f)** 341125 + 124563

(g) 415306 + 372002 **(h)** 53724 + 612053

2. (a) 43265 + 12521 + 24012

(b) 63143 + 2512 + 1133

(c) 234567 + 42012 + 3220

(d) 24 + 241 + 2310 + 24302

(e) 123456 + 12332 + 1210 + 2001

(f) 5 + 51 + 510 + 87103

3. (a) 62402 + 24659 **(b)** 52876 + 58693

(c) 74251 + 3969 **(d)** 4875 + 92665

(e) 936 + 52186 **(f)** 265849 + 373246

(g) 527496 + 236540 **(h)** 43857 + 649763

(i) 456456 + 367890 **(j)** 1234567 + 8907865

4. (a) 4567 + 34567 + 224567

(b) 56784 + 7654 + 456

(c) 24680 + 678901 + 213140

(d) 13579 + 24680 + 50321 + 11892

(e) 567897 + 43211 + 189458 + 219

(f) 66556 + 4446 + 336 + 26

(g) 77889908 + 7543217 + 85685685

(h) 4488997 + 3322115 + 5544332

Exercise 1B

- Express each of the following as a Roman numeral:
 - 43
 - 54
 - 61
 - 73
 - 81
 - 91
 - 95
 - 99
 - 105
 - 114
 - 164
 - 195
 - 226
 - 341
 - 475
 - 596
 - 611
 - 759
- Write each of the following as a Hindu-Arabic numeral:
 - XXXIV
 - XLV
 - LIV
 - LXXIV
 - XCI
 - XCVI
 - CXI
 - CLIV
 - CCXXIV
 - CCCLXV
 - CDXIV
 - CDLXIV
 - DVI
 - DCCLXVI
- Show that each of the following is meaningless. Give reason in each case.
 - VC
 - IL
 - CVII
 - IXX

Exercise 1C

- Add:
- 34120 + 45230
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