6 CHAPTER

LCM & HCF

EXERCISE

YEAR: 1999

- 1. The HCF of two numbers is 15 and their LCM is 300. If one of the number is 60, the other is:
 - (a) 50
- (b) 75
- (c) 65
- (d) 100
- 2. The product of two numbers is 1280 and their HCF is 8. The LCM of the number will be:
 - (a) 160
- (b) 150
- (c) 120
- (d) 140
- 3. The HCF and LCM of two numbers are 8 and 48 respectively. If one of the number is 24, then the other number is:
 - (a) 48
- (b) 36
- (c) 24
- (d) 16
- 4. The HCF and LCM of two numbers are 12 and 336 respectively. If one of the number is 84, the other is:
 - (a) 36
- (b) 48
- (c) 72
- (d) 96
- 5. The least number which when divided by 4, 6, 8, 12 and 16 leaves a remainder of 2 in each case is:
 - (a) 46
- (b) 48
- (c) 50
- (d) 56
- 6. The least number, which when divided by 12, 15, 20 and 54 leaves a remainder of 4 in each case is:
 - (a) 456
- (b) 454
- (c) 540
- (d) 544
- 7. The maximum number of students among whom 1001 pens and 910 pencils can be distributed in such a way that each student gets same number of pens and same number of pencils, is:

- (a) 91
- (b) 910
- (c) 1001
- (d) 1911
- 8. 4 bells ring at intervals of 30

minutes, 1 hour, $1\frac{1}{2}$ hour and

- 1 hour 45 minutes respectively. All the bells ring simultaneously at 12 noon. They will again ring simultaneously at:
- (a) 12 mid night
- (b) 3 a.m.
- (c) 6 a.m.
- (d) 9 a.m.
- The product of the LCM and HCF of two numbers is 24. The difference of the two numbers is 2. Find the numbers?
 - (a) 8 and 6
- (b) 8 and 10
- (c) 2 and 4
- (d) 6 and 4
- 10. The LCM of two numbers is 495 and their HCF is 5. If the sum of the numbers is 100, then their difference is:
 - (a) 10 (b) 46 (c) 70 (d) 90
- 11. Two numbers, both greater than 29, have HCF 29 and LCM 4147. The sum of the numbers is:
 - (a) 966
- (b) 696
- (c) 669
- (d) 666

YEAR: 2000

- 12. The H.C.F. of two numbers is8. Which one of the following can never be their L.C.M ?
 - (a) 24 (b) 48 (c) 56 (d) 60
- 13. The LCM and the HCF of the numbers 28 and 42 are in the ratio:
 - (a) 6:1
- (b) 2:3
- (c) 3:2
- (d) 7:2

YEAR: 2002

- 14. The LCM of two numbers is 1820 and their HCF is 26. If one number is 130 then the other number is:
 - (a) 70
- (b) 1690
- (c) 364
- (d) 1264
- 15. The HCF and LCM of two numbers are 18 and 378 respectively. If one of the number is 54, then the other number is:
 - (a) 126 (b) 144
 - (c) 198 (d) 238
- 16. The HCF of two number 12906 and 14818 is 478. Their LCM is :
 - (a) 400086
- (b) 200043
- (c) 600129
- (d) 800172
- Find the greatest number of five digits which when divided by 3, 5, 8, 12 leaves 2 as remainder
 - (a) 99999
- (b) 99948
- (c) 99962
- (d) 99722
- 18. The least multiple of 13, which on dividing by 4, 5, 6, 7 and 8 leaves remainder 2 in each case is
 - (a) 2520
- (b) 842
- (c) 2522

(c) 5675

(d) 840

(d) 7664

- 19. Find the largest number of four digits such that on dividing by 15, 18, 21 and 24 the remainders are 11, 14, 17 and 20 respectively.(a) 6557 (b) 7556
- 20. Four bells ring at the intervals of 5, 6, 8 and 9 seconds. All the bells ring simultaneously at same time. They will again ring simultaneously after:
 - (a) 6 minutes (b) 12 minutes
 - (c) 18 minutes (d) 24 minutes

	(c) 24 (d) 32		(c) 630 (d) 196		(a) 076 (b) 000	
22.	A milkman has 75 litres mil	k 31.	The smallest square number		(a) 276 (b) 299	
	in one cane and 45 litres in another. The maximum capac-		divisible by 10, 16 and 24 is: (a) 900 (b) 1600		(c) 345 (d) 322	
					If the students of a class can	
	ity of container which can mea	1-	(c) 2500 (d) 3600		be grouped exactly into 6 or 8	
	sure milk of either containe				or 10, then the minimum num-	
	exact number:	32.	From a point on a circular		ber of students in the class	
	(a) 1 litre (b) 5 litres		track 5 km long A, B and C started running in the same		must be.	
	(c) 15 litres (d) 25 litres		direction at the same time		(a) 60 (b) 120	
23.	Two numbers are in the ratio 3: 4. If their HCF is 4, then their LCM is (a) 48 (b) 42 (c) 36 (d) 24		The same of the sa		(c) 180 (d) 240	
					The least number which when	
					divided by 4, 6, 8 and 9 leave zero	
					remainder in each case and	
24.	Find the least multiple of 23, which when divided by 18, 21 and 24 leaves the remainder 7,				when divided by 13 leaves a re-	
			meet again after		mainder of 7 is:	
			(a) 30 hours (b) 6 hours		(a) 144 (b) 72	
	10 and 13 respectively.		Manda Mark Mandanakanak Markasak ang kangkarakanak		(c) 36 (d) 85	
	(a) 3013 (b) 3024	22	(c) 10 hours (d) 15 hours	41.	The number nearest to 10000,	
	(c) 3002 (d) 3036	33.	What is the least number of		which is exactly divisible by	
	YEAR: 2003		square tiles required to pave the floor of a room 15 m 17 cm		each of 3, 4, 5, 6, 7 and 8, is:	
25			long and 9 m 2 cm broad?		(a) 9240 (b) 10080	
23.	The product of two number is 4107. If the HCF of the numbers		(a) 840 (b) 841		(c) 9996 (d) 10000	
	is 37, the greater number is		(c) 820 (d) 814	42.	Let N be the greatest number	
	(a) 185 (b) 111		If the ratio of the two numbers		that will divide 1305, 4665 and	
	(c) 107 (d) 101	34.	is 2:3 and their LCM is 54,		6905 leaving the same remain-	
26.			then the sum of the two		der in each case. Then, sum of	
	and their HCF is 27. If one of		number is:		the digits in N is:	
	the number is 189, the other	er	(a) 5 (b) 15		(a) 4 (b) 5	
	number is:		(c) 45 (d) 270		(c) 6 (d) 8	
	(a) 297 (b) 584	35	The ratio of two numbers is 4:5	43.	The sum of two numbers is 36	
0.7	(c) 189 (d) 216		and their LCM is 120. The		and their HCF is 4. How many	
27.	The least perfect square, which is divisible by each of 21,		numbers are		pairs of such number are pos-	
	36 and 66 is:	ι,	(a) 30, 40 (b) 40, 32		sible?	
	(a) 214344 (b) 214434		(c) 24, 30 (d) 36, 20		(a) 1 (b) 2	
	(c) 213444 (d) 231444	36.	Three numbers which are co-		(c) 3 (d) 4	
28.	The least number, which when				The greatest number, that	
	divided by 4, 5 and 6 leave		that the product of the first two		divides 122 and 243 leaving	
	remainder 1, 2 and	3	is 551 and that of the last two		respectively 2 and 3 as remain-	
	respectively is:		is 1073. The sum of the three		ders is:	
	(a) 57 (b) 59		numbers is:		(a) 12 (b) 24	
	(c) 61 (d) 63		(a) 75 (b) 81		(c) 30 (d) 120	
29.	Let the least number of six dig	g-	(c) 85 (d) 89		YEAR: 2005	
	: A	~=	TION 1 TOTA C.		,	

37. HCF and LCM of two numbers

(a) 70

(c) 63

are 7 and 140 respectively. If

the numbers are between 20 and

45, the sum of the numbers is:

(b) 77

(d) 56

30. Which is the least number

and 30?

(a) 2520

which when doubled will be

exactly divisible by 12, 18, 21

(b) 1260

YEAR: 2004

38. The HCF of two numbers is 23

45. The HCF and LCM of two 2-digit

(a) 40, 48

(c) 64, 80

number are 16 and 480

respectively. The numbers are:

(b) 60, 72

(d) 80, 96

and the other two factors of

their LCM are 13 and 14. The

larger of the two numbers is:

21. The greatest number, which

tively:

(a) 8

when divides 989 and 1327 leave

remainders 5 and 7 respec-

its which when divided by 4, 6,

10, 15 leaves in each case

same remainder 2 be N. The

(b) 5

(d) 6

sum of digits in N is:

(a) 3

(c) 4

(b) 16

46.	The smallest number, which when divided by 12 and 16 leaves remainder 5 and 9		54.	Which greatest number will divide 3026 and 5053 leaving remainders 11 and 13 respectively?		62.	The sum of two numbers is 45. Their difference is $\frac{1}{9}$ of their	
	respectively, is:						sum. Their LO	,
	(a) 55	(b) 41		(a) 19	(b) 30		(a) 200	(b) 250
	(c) 39			(c) 17	(d) 45		(c) 100	(d) 150
47.	A number which when divided by 10 leaves a remainder of 9, when divided by 9 leaves a remainder of 8, and when divided by 8 leaves		55.	What is the greatest number which will divide 110 and 128 leaving a remainder 2 in each case?		63.	The HCF of two numbers, each having three digits, is 17 and their LCM is 714. The sum of the numbers will be:	
	a remainder o			(a) 8	(b) 18		(a) 289	(b) 391
		(b) 539		(c) 28	(d) 38		(c) 221	(d) 731
	(c) 359	` '		VEAD.	2007		(0) 221	(d) 701
48.			56.	YEAR : 2007			YEAR : 2	2008
				leaves the rendivided by any 18, is	tiple of 7, which nainder 4, when of 6, 9, 15 and	64.	numbers are respectively. possible pa	product of two 15 and 6300 The number of airs of the
	The second second	(b) 603		(a) 76	(b) 94		numbers is	7.0
	(c) 723	, ,		(c) 184	(d) 364		(a) 4	(b) 3
49.	management and the second of t		57.	The largest number of five digits which, when divided by 16, 24, 30, or 36 leaves the same remainder 10 in each case, is: (a) 99279 (b) 99370 (c) 99269 (d) 99350		65.	(c) 2 (d) 1 The smallest number, which when divided by 5, 10, 12 and 15, leaves remainder 2 in each case, but when divided by 7 leaves no remainder, is:	
	YOUR DESCRIPTIONS	(b) 242	58.		ber, which is a		(a) 189	(b) 182
	(c) 1562	(d) 1586	56.		and is divisible by		(c) 175	(d) 91
50.	What is the greatest number that will divide 307 and 330				mbers 16, 20 and	66.	What least nu	amber must be m 1936 so that
	respectively? (a) 19	(b) 16		(a) 1600 (c) 6400	(b) 3600 (d) 14400		divided by 9, 10	number when and 15 will leave
	(c) 17	(d) 23	59.	The number n	earest to 43582		remainder 7?	se the same
51.		HCF and LCM			ch of 25, 50 and			(b) 36
	of two number is 680 and the			75 is:			(a) 37	(b) 36
	LCM is 84 times the HCF. If one			(a) 43500	(b) 43650	67	(c) 39	(d) 30
	of the number is 56, the other is:			(c) 43600	(d) 43550	07.	The least number, which wh divided by 18, 27 and 36 sep	
	(a) 84	(b) 12	60.		English, Math-			emainders 5, 14,
	(c) 8	(d) 96		ematics and Science books containing 336, 240, 96 books			23 respectively	
52.		numbers is 20		The same of the sa	ve to be stacked		(a) 95	(b) 113
	times their HCF. The sum of HCF and LCM is 2520. If one of the number 480, the other number is:			-	that all the books		(c) 49	(d) 77
				are stored subject-wise and the height of each stack is the			The smallest number, which when increased by 5 is divis	
	(a) 400	(b) 480			umber of stacks		•	24, 32, 36 and
	(c) 520	(d) 600		will be:	4 \ 01		64, is	
	(-)	()		(a) 14	(b) 21		(a) 869	(b) 859
YEAR: 2006			(c) 22	(d) 48		(c) 571	(d) 427	
53.	53. The largest 4-digit number exactly divisible by each of 12, 15, 18 and 27 is:		61.	Three numbers are in the ratio 2: 3: 4. If their LCM is 240, the smaller of the three numbers is		69.	Two numbers are in the ration 3: 4. If their LCM is 240, the smaller of the two numbers is:	
	(a) 9690	(b) 9720		(a) 40	(b) 60		(a) 100	(b) 80
	(c) 9930	(d) 9960		(c) 30	(d) 80		(c) 60	(d) 50

70.	. The product of the LCM and the								
	HCF o	of two n	umbers	is 24.	If the				
	differe	nce of	the nu	mbers	is 2,				
	then	the	greate	er of	the				
	numb								
	(a) 3	(b) 4	(c) 6	(d) 8					
71.	The su	am of t	wo nun	nbers is	216				
	and their HCF is 27. How man								
	pairs	of su	ch nu	mbers	are				
	.1	^							

there? (a) 1 (b) 2 (c) 3 (d) 0

72. The LCM of two numbers is 44 times of their HCF. The sum of the LCM and HCF is 1125. If one number is 25, then the other number is:

(a) 1100

(b) 975

(c) 900

(d) 800

YEAR: 2009

73. The product of two numbers is 20736 and their HCF is 54. Find their LCM.

(a) 685

(b) 468

(c) 648

(d) 384

74. The greatest number of four digits which when divided by 12, 16, and 24 leave remain-2, ders 6 and 14 respectively is:

(a) 9974

(b) 9970

(c) 9807

(d) 9998

75. When a number is divided by 15, 20 or 35, each time the remainder is 8. Then the smallest number is

(a) 428

(b) 427

(c) 328

(d) 338

76. Two numbers are in the ratio 3: 4. The product of their HCF and LCM is 2028. The sum of the numbers is

(a) 68 (b) 72 (c) 86 (d) 91

77. Sum of two numbers is 384. HCF of the numbers is 48. The difference of the numbers is

(a) 100

(b) 192

(c) 288

(d) 336

78. The LCM of two multiples of 12 is 1056. If one of the number is 132, the other number is

(a) 12

(b) 72

(c) 96

(d) 132

79. The product of two numbers is 396 ×576 and their LCM is 6336. Find their HCF

(a) 36 (b) 34 (c) 63 (d) 43

Year: 2010

80. The product of two numbers is 216. If the HCF is 6, then their LCM is

(a) 72

(b) 60

(c) 48

(d) 36

81. The greatest number, which when subtracted from 5834, gives a number exactly divisible by each of 20, 28, 32 and 35, is

(a) 1120

(b) 4714

(c) 5200

(d) 5600

82. The smallest perfect square divisible by each of 6, 12 and 18 is:

(a) 196

(b) 144

(c) 108

(d) 36

83. Two numbers are in the ratio 3: 4. Their LCM is 84. The greater number is:

(a) 21

(b) 24

(c) 28

(d) 84

84. The sum of two numbers is 84 and their HCF is 12. Total number of such pairs of number is

(a) 2

(b) 3

(c) 4

(d) 5

The sum of two numbers is 36 and their HCF and LCM are 3 and 105 respectively. The sum of the reciprocals of two numbers:

(a) $\frac{2}{35}$

(b) $\frac{3}{25}$

(c) $\frac{4}{35}$

(d) $\frac{2}{25}$

YEAR: 2011

86. The HCF and LCM of two numbers are 12 and 924 respectively. Then the number of such pairs is:

(a)0

(b) 1

(c) 2

(d) 3

87. The LCM of two numbers is 520 and their HCF is 4. If one of the numbers is 52, then the other number is:

(a) 40

(b) 42

(c) 50

(d) 52

88. The HCF of two numbers is 96 and their LCM is 1296. If one of the number is 864, the other is

(a) 132

(b) 135

(c) 140

(d) 144

89. The LCM of two numbers is 4 times their HCF. The sum of LCM and HCF is 125. If one of the number is 100, then the other number is

(a) 5

(b) 25

(c) 100

(d) 125

90. The product of two numbers is 2028 and their HCF is 13. The number of such pairs is

(a) 1 (b) 2

(c) 3 (d) 4

91. The LCM of three different numbers is 120. Which of the following cannot be their HCF?

(a) 8

(b) 12

(d) 35 (c) 24

92. The least number which when divided by 16, 18, 20 and 25 leaves 4 as remainder in each case but when divided by 7 leaves no remainder is:

(a) 17004

(b) 18000

(c) 18002 (d) 18004 93. The traffic lights at three different road crossings change after 24 seconds, 36 seconds and 54 seconds respectively. If they all change simultaneously at 10:15:00 AM, then at what time will they again change simultaneously?

(a) 10:16:54 AM

(b) 10:18:36 AM (c) 10:17:02 AM

(d) 10:22:12 AM

94. Find the HCF of $\frac{3}{4}$, $\frac{5}{6}$ and $\frac{6}{7}$

(a) $\frac{5}{14}$

(b) $\frac{1}{84}$

(d) $\frac{1}{168}$

95. Four runners started running simultaneously from a point on a circular track. They took 200 seconds, 300 seconds, 360 seconds and 450 seconds to complete one round. After how much time do they meet at the starting point for the first time? (a) 1800 seconds (b) 3600 seconds (c) 2400 seconds (d) 4800 seconds

- 96. Three bells ring simultaneously at 11 a.m. They ring at regular intervals of 20 minutes, 30 minutes, 40 minutes respectively. The time when all the three ring together next is:
 - (a) 2 p.m.
- (b) 1 p.m.
- (c) 1.15 p.m. (d) 1.30 p.m.
- 97. A farmer has 945 cows and 2475 sheep. He farms them into flocks, keeping cows and sheep separate and having the same number of animals in each flock. If these flocks are as large as possible, then the maximum number of animals in each flock and total number of flocks required for the purpose are respectively
 - (a) 15 and 228 (b) 9 and 380
 - (c) 45 and 76 (d) 46 and 75
- 98. The greatest 4-digit number exactly divisible by 10, 15, 20 is
 - (a) 9990
- (b) 9960
- (c) 9980
- (d) 9995
- 99. The greatest number that divides 411, 684, 821 and leaves 3, 4 and 5 as remainders, respectively, is
 - (a) 254
- (b) 146
- (c) 136
- (d) 204
- 100. The ratio of two numbers is 3: 4 and their HCF is 5. Their LCM is:
 - (a) 10
- (b) 60
- (c) 15
- (d) 12
- 101. If A and B are the HCF and LCM respectively of two algebric expressions x and y, and A + B = x + y, then the value of $A^3 + B^3$ is
 - (a) $x^3 y^3$
- (b) x^3
- (c) y^3
- (d) $x^3 + y^3$
- 102. The HCF and LCM of two numbers are 44 and 264 respectively. If the first number is divided by 2, the quotient is 44. The other number is:
 - (a) 147
- (b) 528
- (c) 132
- (d) 264
- 103. Three men step off together from the same spot. Their steps measure 63 cm, 70 cm and 77 cm respectively. The minimum distance each should cover so that all can cover the distance in complete steps is

- (a) 9630 cm
- (b) 9360 cm
- (c) 6930 cm
- (d) 6950 cm
- 104. Find the greatest number which will exactly divide 200 and 320.
 - (a) 10
- (b) 20
- (c) 16
- (d) 40
- 105.84 Maths books, 90 Physics books and 120 Chemistry books have to be stacked topicwise. How many books will be there in each stack so that each stack will have the same height too?
 - (a) 12 (b) 18 (c) 6 (d) 21
- 106. The greatest number that will divide 729 and 901 leaving remainders 9 and 5 respectively is
 - (a) 15 (b) 16 (c) 19 (d) 20
- 107. Three numbers are in the ratio 1:2:3 and their HCF is 12. The numbers are
 - (a) 12, 24, 36 (b) 5, 10, 15
 - (c) 4, 8, 12
- (d) 10, 20, 30
- 108. If x : y be the ratio of two whole numbers and z be their HCF, then the LCM of those two number is :
 - (a) yz
- (b) $\frac{xz}{y}$
- (c) $\frac{xy}{z}$
- (d) xyz
- 109. If the HCF and LCM of two consecutive (positive) even numbers be 2 and 84 respectively, then the sum of the numbers is:
 - (a) 30 (b) 26 (c) 14 (d) 34
- 110. If $P = 2^3.3^{10}.5$, $Q = 2^5.3.7$, then HCF of P and Q is:
 - (a) 2.3.5.7
- (b) 3.2^3
- (c) $2^2.3^7$
- (d) $2^5.3^{10}.5.7$
- 111. A fraction becomes $\frac{1}{6}$ when 4 is

subtracted from its numerator and 1 is added to its denominator. If 2 and 1 are respectively added to its numerator and the

denominator, it becomes $\frac{1}{3}$.

Then, the LCM of the numerator and denominator of the said fraction, must be

- (a) 14
- (b) 350
- (c) 5
- (d) 70

YEAR: 2012

- 112. HCF of $\frac{2}{3}$, $\frac{4}{5}$ and $\frac{6}{7}$ is
 - (a) $\frac{48}{105}$
- (b) $\frac{2}{105}$
- (c) $\frac{1}{105}$
- (d) $\frac{24}{105}$

(FCI Assit. Grade III 05/02/2012 (paper I)

- 113. A milk vendor has 21 litres of cow milk, 42 litres of toned milk and 63 litres of double toned milk. If he wants to pack them in cans so that each can contains same litres of milk and does not want to mix any two kinds of milk in a can, then the least number of cans required is:
 - (a) 3 (b) 6 (c) 9 (d) 12

(SSC Const. (GD) (IInd sitting)

- 114. The LCM of two positive integers is twice the larger number. The difference of the smaller number and the GCD of the two numbers is 4. The smaller number is:
 - (a) 12 (b) 6
- (c) 8 (d) 10

SSC DEO & LDC 21/10/2012 (IInd sitting)

- 115. The HCF (GCD) of a, b is 12, a, b are positive integers and a > b > 12. The smallest values of (a, b) are respectively
 - (a) 12, 24
- (b) 24, 12
- (c) 24, 36
- (d) 36, 24

SSC CGL TIER 1 Exam

YEAR: 2013

116. Product of two co-prime numbers is 117. Then their LCM is (a) 117 (b) 9 (c) 13 (d) 39

SSC CAPF & CISF ASI Exam 23/06/2013

- 117. The product of two numbers is 2160 and their HCF is 12. Number of such possible pairs are (a) 1 (b) 2 (c) 3 (d) 4
 - SSC CAPF & CISF ASI 23/06/2013

YEAR: 2014

- 118. Five bells begin to toll together and toll respectively at intervals of 6, 7, 8, 9 and 12 seconds. After how many seconds will they toll together again?
 - (a) 72 sec.
- (b) 612 sec.
- (c) 504 sec.
- (d) 318 sec.

- 119. LCM of $\frac{2}{3}$, $\frac{4}{9}$, $\frac{5}{6}$ is
 - (a) $\frac{8}{27}$
- (b) $\frac{20}{3}$
- (c) $\frac{10}{3}$
- (d) $\frac{20}{27}$
- 120. The least number which when divided by 6,9,12,15,18 leaves the same remainder 2 in each case is:
 - (a) 180
- (b) 176
- (c) 182
- (d) 178

(SSC CGL 16-08-2015, Morning)

- 121. The HCF of $x^6 1$ and $x^4 + 2x^3 2x^1 1$ is:
 - (a) $x^2 + 1$
- (b) x 1
- (c) $x^2 1$
- (d) x + 1

(SSC CGL 16-08-2015, Morning)

- 122. The greatest number by which 2300 and 3500 are divided leaving the remainders of 32 and 56 respectively:
 - (a) 168
- (b) 42
- (c) 48
- (d) 136

(CPO 26-06-2015, Evening)

- 123. Let *x* be the smallest number, which when added to 2000 makes the resulting number divisible by 12, 16, 18 and 21. The sum of the digits of *x* is
 - (a) 6 (b) 5
- (c) 7 (d) 5

(CGL Mains 26-06-2015)

- 124. Let x be the least number, which when divided by 5, 6, 7 and 8 leaves a remainder 3 in each case but when divided by 9 leaves remainder 0. the sum of digits of x is
 - (a) 24 (b) 21 (c) 22 (d) 18

(CGL Mains 26-06-2015)

- 125. A number when divided by 361 gives remainder 47. When the same number is divided by 19 then find the remainder?
 - (a) 9 (b) 1
- (c) 8 (d) 3

(CGL Mains 26-06-2015)

- 126. The H.C.F and L.C.M of two numbers are 21 and 84 respectively. If the ratio of the two numbers is 1:4, then the larger of the two numbers is
 - (a) 48 (b) 12 (c) 84 (d) 108

(CGL Mains 26-06-2015)

- 127. The LCM of two numbers is 12 times their HCF. The sum of the HCF and LCM is 403. If one of the number is 93, then the other is
 - (a) 116
- (b) 124
- (c) 112
- (d) 120

(SSC LDC 01-11-2015, Morning)

- 128. The number of pairs of positive integers whose sum is 99 and HCF is 9 is:
 - (a) 5
- (b) 2
- (c) 3
- (d) 4

(SSC LDC 01-11-2015, Evening)

- 129. The ratio of two numbers is 3: 4 and their LCM is 120. The sum of numbers is:
 - (a) 70
- (b) 35
- (c) 140
- (d) 105

(SSC LDC 01-11-2015, Evening)

- 130. The greatest four digit number which is exactly divisible by each one of the numbers 12, 18, 21 and 28.
 - (a) 9828
- (b) 9882
- (c) 9928
- (d) 9288

(SSC LDC 01-11-2015, Evening)

- 131. The smallest five digit number which is divisible by 12, 18 and 21 is:
 - (a) 10080
- (b) 30256
- (c) 10224
- (d) 50321

(SSC LDC 06-12-2015, Evening)

- 132.A number between 1000 and 2000 which when divided by 30, 36 and 80 gives a remainder 11 in each case is
 - (a) 11523
- (b) 1451
- (c) 1641
- (d) 1712

(SSC LDC 20-12-2015, Morning)

- 133. The difference between the greatest and least prime numbers which are less than 100 is
 - (a) 95
- (b) 96
- (c) 97
- 7 (d) 94

(SSC LDC 20-12-2015, Morning)

- 134. The number between 4000 and 5000 that is divisible by each of 12, 18, 21 and 32 is
 - (a) 4203
- (b) 4023
- (c) 4032
- (d) 4302
- (SSC LDC 20-12-2015, Morning)

- 135. The ratio of HCF and LCM of two numbers a and b is 1:30 and the difference between the HCF and LCM is 493. Find the possible number of pairs of a and b.
 - (a) One
- (b) Two
- (c) Four
- (d) Five

(SSC CPO(Re) 04-06-2016, Morning)

- 136. The LCM of four consecutive numbers is 60. The sum of the first two numbers is equal to the fourth number. What is the sum of four numbers?
 - (a) 17
- (b) 14
- (c) 21
- (d) 24

(SSC CPO(Re) 05-06-2016, Evening)

- 137. If the product of three consecutive numbers is 210 then the sum of the smaller numbers is:
 - (a)3
- (b) 4
- (c) 5
- (d) 11

(SSC CPO(Re) 07-06-2016, Morning)

- 138. Three bells ring at interval of 36 seconds, 40 seconds and 48 seconds respectively. They start ringing together at a particular time. They will ring together after every
 - (a) 6 minutes
 - (b) 12 minutes
 - (c) 18 minutes
 - (d) 24 minutes

(SSC CGL Mains Exam- 2016)

- 139. Two pipes of length 1.5 m and 1.2 m are to be cut into equal pieces without leaving any extra length of pipes. The greatest length of the pipe pieces of same size which can be cut from these two lengths will be
 - (a) 0.13 m
- (b) 26 m
- (c) 0.3 m
- (d) 0.41 m

(SSC CGL Mains Exam- 2016)

- 140. A General of an Army wants to create a formation of square from 36562 army men. After arrangement, he found some
 - (a) 36
- (b) 65
- (c) 81
- (d) 97

army men remained unused.

(SSC CGL Mains Exam- 2016)

ANSWER KEY

1.	(b)	19. (b)	37. (c)	57. (b)	75. (a)	93. (b)	110. (b)	126. (c)
2.	(a)	20. (a)	38. (d)	58. (b)	76. (d)	94. (b)	111. (a)	127. (b)
3.	(d)	21. (c)	39. (b) 40. (b)	59. (b)	77. (c)	95. (a)	112. (b)	128. (a)
4.	(b)	22. (c)	40. (b) 41. (b)	60. (a)	78. (c)	96. (b)	113. (b)	129. (a)
5.	(c)	23. (a)	42. (a)	61. (a)	79. (a)	97. (c)	114. (c)	130. (a)
6.	(d)	24. (a)	43. (c)	62. (c)	80. (d)	98. (b)	115. (d)	131. (a)
7.	(a)	25. (b)	44. (d)	63. (c)	81. (b)	99. (c)	116. (a)	
8.	(d)	26. (a)	45. (d) 46. (b)	64. (c)	82. (d)	100. (b)	117. (b)	132. (b)
9.	(d)	27. (c)	46. (b) 47. (c)	65. (b)	83. (c)	101. (d)	101000000 N 01	133. (a)
10.	(a)	28. (a)	48. (d)	66. (c)	84. (b)	102. (c)	118. (c)	134. (c)
11.	(b)	29. (b)	49. (b)	67. (a)	85. (c)	103. (c)	119. (b)	135. (c)
12.	(d)	30. (b)	50. (a)	68. (c)	86. (c)	104. (d)	120. (c)	136. (b)
13.	(a)	31. (d)	51. (d)	69. (c)	87. (a)	105. (c)	121. (c)	137. (d)
14.	(c)	32. (c)	52. (d)	70. (c)	88. (d)	106. (b)	122. (b)	138. (b)
15.	(a)	33. (d)	53. (b)	71. (b)	89. (b)	107. (a)	123. (c)	
16.	(a)	34. (c)	54. (d)	72. (a)	90. (b)	108. (d)	124. (d)	139. (c)
17.	(c)	35. (c)	55. (b)	73. (d)	91. (d)	109. (b)	125. (a)	140. (c)
18.	(c)	36. (c)	56. (d)	74. (a)	92. (d)	, ,		

EXPLANATION

1. (b) HCF = 15LCM = 300

1st number = 60

Let 2nd number = x

HCF × LCM = 1st Number × 2nd number

$$15 \times 300 = 60 \times x$$
$$x = 75$$

- : Other number = **75**
- 2. (a) Product of two numbers = 1280 HCF = 8

$$LCM = \frac{1280}{8} = 160$$

3. (d) HCF = 8

LCM = 48

One number = 24

Let other number be = y

 $\therefore 24y = 48 \times 8$

y = 16

4. (b) HCF = 12

LCM = 336

One number = 84

Let another number be = y

 $:. 84y = 12 \times 336$

y = 48

5. (c) LCM of (4, 6, 8, 12, 16)

 $\Rightarrow 16 \times 3 = 48$

- .. The number when divided by (4, 6, 8, 12, 16) leaves remainder 2 is = 48 + 2 = 50
- 6. (d) LCM of (12, 15, 20, 54)

$$\Rightarrow$$
 4 × 3 × 5 × 9 = 540

- : The required number is 540 + 4 = **544**
- ⇒ Because when LCM is divided by each number it divide LCM completely. By adding 4 in LCM leaves remainder 4.
- 7. (a) 1001 pens, 910 pencils (given) HCF of 1001, 910 is = 91
 - : maximum no. of students are = 91
- 8. (d) LCM (30, 60, 90, 105)
 - $\therefore 15 \times 2 \times 2 \times 3 \times 7$
 - = 1260 minutes
 - $=\frac{1260}{60}$ = 21 hours

(they ring simultaneously after every 21 hours

They ring at 12 noon. So they again ring at 9 am

- 9. (d) LCM \times HCF = 24
 - :. Product of numbers = 24 Let no. be = x, y

$$xy = 24$$

and x - y = 2 (given)

Factors of xy = 24 are (4, 6) (12, 2) (8, 3) (24, 1)

 \Rightarrow Now difference between numbers be

$$= (x - y) = 2$$

So, factor is (4, 6)

10. (a) LCM = 495

HCF = 5 (given)

: Let numbers are

= 5x & 5y

 \therefore LCM = 5 xy

5 x y = 495

xy = 99

: possible co-prime factors are

1, 99 9, 11

. Possible numbers are

$$5x$$
, $5y = \begin{bmatrix} 45, & 55 \\ 5, & 495 \end{bmatrix}$

Now given that sum of numbers = 100

- so, required numbers are = (45, 55)
- : difference of numbers
- = 55 45 = **10**
- 11. (b)HCF = 29

:. Let numbers are

29*x*, 29*y*

LCM = 29xy

- \Rightarrow LCM = 4147 (given)
- $\Rightarrow 29xy = 4147$

$$xy = \frac{4147}{29} = 143$$

possible co-prime factors

$$= \left(\begin{array}{c} 1, & 143 \\ 11, & 13 \end{array}\right)$$

- : possible numbers are
- =(29, 4147), (319, 377)

But both numbers are greater than 29

(given)

- .. Numbers are (319, 377)
- .: Sum of numbers
- = 319 + 377 = **696**
- 12. (d) HCF = 8

 \Rightarrow Now, LCM should have a factor 8.

So, check also the option we have only 60 which does not have a factor 8. So, it will never be the LCM.

13. (a) Numbers, x = 28, y = 42

HCF (28, 42)

 \Rightarrow difference = 42 - 28 = 14

⇒ For HCF of any numbers take their difference. HCF will be either the factor of that difference or the difference itself.

Now,

LCM of 28, 42

$$14 \times 2 \times 3 = 84$$

⇒ LCM : HCF

84 : 14

6:1

14. (c) LCM = 1820

$$HCF = 26$$

Ist number = 130

- \Rightarrow LCM×HCF = Product of numbers
- \Rightarrow Let the other number is x
- $\therefore 130 \times x = 1820 \times 26$

$$x = \frac{1820 \times 26}{130} = 364$$

15. (a) HCF = 18

$$LCM = 378$$

One number = 54

Let another number be = y

$$\therefore 54y = 18 \times 378$$

$$y = \frac{18 \times 378}{54} = 126$$

16. (a) HCF = 478

Numbers are = 12906 and 14818

$$\therefore$$
 LCM × HCF = 12906 × 14818

$$LCM \times 478 = 12906 \times 14818$$

LCM = 400086

$$\Rightarrow$$
 3 × 5 × 8 × 3 = **120**

⇒ Now greatest five digit number is 99999

on dividing 99999 by = 120 (LCM) we get remainder-

$$=\frac{99999}{120}$$
, remainder = 39

⇒ By subtracting remainder from 99999 we get the greatest five digit number which is completely divisible by given numbers (3, 5, 8, 12).

⇒ Now, we required the greatest five digit number which when divided by (3, 5, 8, 12) leaves remainder 2 in each case.

 \Rightarrow add 2 in the 99960

$$= 4 \times 5 \times 6 \times 7 = 840$$

= 840k + 2, which is divisible by 13.

For
$$\frac{840k+2}{13}$$
, (remainder = 0)

Remainder =
$$\frac{8k+2}{13}$$

Put k = 3

Then, remainder = 0

for least multiple value of k is minimum

$$\Rightarrow$$
 at k= 3 we get 840 k + 2
= 840 × 3 + 2
= 2520 + 2 = **2522**

$$\Rightarrow$$
 5 × 3 × 6 × 7 × 4 = 2520

⇒ In such type of questions, we take the difference between given number and remainder of that number.

Number Remainder

$$\Rightarrow (15-11) = 4
(18-14) = 4
(21-17) = 4
(24-20) = 4$$
It will be same always

Now: Largest 4 digit number is 9999

 \Rightarrow On dividing 9999 by LCM (2520) we get remainder

⇒ 2439

Subtract remainder from 9999 we get largest 4 digit number, which is divisible by given number

= 9999 - 2439 = 7560 (9999 But required no. gives difference on dividing)

SO,

: our required number

$$= 7560 - 4(difference) = 7556$$

20. (a) LCM of $(5, 6, 8, 9) = 5 \times 6 \times 4 \times 3$ = 360 seconds

$$= \frac{360}{60} = 6 \text{ minutes}$$

⇒ Bells will ring simultaneously after every 6 minutes.

21. (c)
$$989 - 5 = 984$$

$$1327 - 7 = 1320$$

(Subtract the remainder from the number.

$$HCF = (984, 1320) = 24$$

for greatest number take HCF of the numbers

22. (c)75 litres, 45 litres

For maximum capacity take HC

For maximum capacity take HCF (75, 45) = 15

23. (a) Let numbers be =
$$x$$
, y
 $x: y = 3: 4$ (given)
HCF = 4

:. Numbers are =
$$x = 4 \times 3 = 12$$

 $y = 4 \times 4 = 16$

LCM of
$$(12, 16) = 4 \times 3 \times 4 = 48$$

24. (a)
$$18 - 7 = 11$$

$$21 - 10 = 11$$

$$24 - 13 = 11$$

take LCM of $(18, 21, 24) \Rightarrow 9 \times 2$

 \times 7 \times 4 = 504 \Rightarrow required number = (504k - 11)

which is divided by 23. $\therefore \text{ For } \frac{504k - 11}{23},$

Remainder should be zero
Put minimum value of k so that
it completely divides 23.

 \Rightarrow at k = 6, 504k - 11= 3013 completely divisible by 23.

: required number is = 3013.

25. (b) HCF = 37

: Let the no. are

$$= 37x & 37y$$

given,
$$37x \times 37y = 4107$$

$$= xy = 3$$

possible factors of xy = (1, 3)

- : numbers are (37, 37 × 3)
- = (37, 111) greater number is = **111**

26. (a)

$$\begin{array}{ccc}
 & \text{HCF} &=& 27 \\
 & \text{LCM} &=& 2079 \\
 & \text{one number} &=& 189
\end{array}$$
gives

Let another number be y

⇒ Product of numbers = LCM × HCF

$$189 \times y = 27 \times 2079$$

$$y = 297$$

$$= 21 \times 12 \times 11$$

$$= 7 \times 3 \times 4 \times 3 \times 11$$

$$= 7 \times 3 \times 2 \times 2 \times 3 \times 11$$

for perfect square multiply by 7×11 So that pairs of number from perfect square

$$\therefore \ 7 \times 7 \times 3 \times 3 \times 2 \times 2 \times 11 \times 11$$

required result is \Rightarrow 213444

(which is perfect square

28. (a)
$$4-1=3$$

$$5-2 = 3$$

$$6 - 3 = 3$$

LCM of
$$(4, 5, 6) = 4 \times 5 \times 3 = 60$$

: required number is

$$60 - 3 = 57$$

29. (b) LCM (4, 6, 10, 15)

$$LCM = 2 \times 2 \times 3 \times 5 = 60$$

⇒ least number of six digit

= 100000

 \Rightarrow divide 100000 by 60 we get remainder 40

⇒ least six digit number which is divisible by (4, 6, 10, 15) given number is

$$= (100000 + (60 - 40)) = 100020$$

$$: N \Rightarrow 100020 + 2 = 100022$$

: Sum of digits

$$= 1 + 0 + 0 + 0 + 2 + 2 = 5$$

30. (b) LCM of (12, 18, 21, 30)

$$4 \times 3 \times 6 \times 7 \times 5 = 2520$$

So, required number

$$= \frac{2520}{2} = 1260$$

$$= 5 \times 2 \times 8 \times 3 = 240$$

 \Rightarrow for square no. split the LCM into its factors

$$= 5 \times 2 \times 2 \times 2 \times 2 \times 3$$

$$= 5 \times 5 \times 2 \times 2 \times 2 \times 2 \times 3 \times 3$$

= 3600

32. (c) Distance =
$$5 \text{ km}$$

Speed of A =
$$2\frac{1}{2}$$
 km/hr

Time taken by A

$$=\frac{5}{5}\times 2 = 2$$
 hours

 \Rightarrow Speed of B = 3 km/hr

Time taken by B

$$=\frac{5}{3}$$
 hours

$$\Rightarrow$$
 Speed of C = 2 km/hour

$$\therefore$$
 Time taken by $C = \frac{5}{2}$ hours

$$\frac{\text{LCM of numerator}}{\text{HCF of denomintor}} = 2, \frac{5}{3}, \frac{5}{2}$$

$$=2, \frac{5}{3}, \frac{5}{2}$$

$$LCM = \frac{10}{1} = 10$$

They will meet again after 10 hours

33. (d) Required no. of tiles are

$$= \frac{\text{area of floor}}{\text{area of tiles}}$$

Sides of tiles is HCF (1517, 902)

: area of tiles = 41 × 41

: No. of tiles

$$= \frac{1517 \times 902}{41 \times 41} = 814$$

34. (c) Let numbers are A & B respectively

A: B
$$2x: 3x$$
 (given)

LCM = $2 \times 3 \times x = 6x$ According to the question,

$$6x = 54$$

$$x = 9$$

$$A = 2x = 2 \times 9 = 18$$

$$B = 3x = 3 \times 9 = 27$$

: sum of numbers

$$= A + B = 18 + 27 = 45$$

or
$$(3x + 2x) = 5x = 5 \times 9 = 45$$

35. (c) Let numbers are A & B respectively

A : B

4x : 5x (given)

$$\therefore LCM = 4 \times 5 \times x = 20x$$

$$20x = 120$$

$$x = 6$$

$$A = 4x = 4 \times 6 = 24$$

$$B = 5x = 5 \times 6 = 30$$

36. (c) Let numbers are a, b, c.= a, b, c are co-prime numbersHCF of co- prime numbers = 1

$$\therefore$$
 HCF (a, b, c) = 1

$$a \times b = 551$$
, $b \times c = 1073$

$$\Rightarrow \frac{a \times b}{b \times c} = \frac{1073}{551} = \frac{37 \times 29}{19 \times 29}$$

$$\Rightarrow \frac{a}{c} = \frac{37}{19}$$

⇒ common 'b' factor is cancel out.

$$a = 37, b = 29 c = 19$$

$$= a + b + c = 37 + 29 + 19 = 85$$

37. (c) HCF of numbers = 7

 \therefore Let the numbers are 7x and 7y LCM = 7xy

$$7xy = 140 \text{ (given)}$$
$$xy = 20$$

 \Rightarrow possible co-prime factors of xy

= (1,20), (4,5)

 \Rightarrow numbers are between 20 and 45

.. Required numbers are

$$= 4 \times 7 = 28$$
 and $5 \times 7 = 35$

$$\Rightarrow$$
 sum of numbers are = $28 + 35 = 63$

38. (d)
$$HCF = 23$$

 \therefore Let numbers are = 23x, 23y

$$\therefore$$
 LCM = $23xy$

⇒ Now given that factor of LCM are 13, 14

$$\therefore$$
 LCM = 23 × 13 × 14

numbers are =
$$23 \times 13$$

$$larger = 322$$

39. (b) LCM of
$$(6, 8, 10) = 3 \times 2 \times 4 \times 5$$

= 120

40. (b) LCM of
$$(4, 6, 8, 9) = 2 \times 2 \times 3 \times 2 \times 3 = 72$$

:. Required result should be = 72.

41. (b) LCM of
$$(3, 4, 5, 6, 7, 8)$$

 $3 \times 4 \times 5 \times 7 \times 2 = 840$

$$\Rightarrow \frac{10000}{840}$$
, we get remainder = 760

Now two possiblities are

or
$$10000 + (840 - 760) = 10080$$

42. (a) 1305, 4665, 6905 are three numbers greatest number which leaves same remainder in each case. To find this take difference of numbers

: 1120 is the no. which leaves the same remainder when divide 1305, 4665, 6905

$$\Rightarrow$$
 1 + 1 + 2 + 0 = 4

43. (c)
$$HCF = 4$$

:. Let numbers are 4x and 4ygiven sum = 4x + 4y = 36 and x + y = 9

possible pairs

 \Rightarrow (1+8), (2+7), (4+5), numbers should be co prime. Hence only 3 pairs

44. (d)
$$122 - 2 = 120$$
 (subtract difference) $243 - 3 = 240$ (from number) HCF = $(120, 240) = 120$

45. (d)
$$HCF = 16$$

∴ Let numbers are 16x and 16y
 16xy = 480
 xy = 30

.. possible pairs

= (1,30), (2, 15), (6, 5)

possible numbers are

= (16, 480), (32,240), (80,96)

: (80, 96) is the answer in the given options of 2 digit.

46. (b)
$$12 - 5 = 7$$

$$16 - 9 = 7$$

Remainder always remains same in such question,

$$\therefore$$
 LCM of (12, 16) = 48

$$\therefore$$
 Required result = $48 - 7 = 41$

47. (c)
$$10 - 9 = 1$$

$$9 - 8 = 1$$

$$8 - 7 = 1$$

:. LCM of (10, 9, 8) =
$$5 \times 2 \times 9 \times 4$$

= 360

$$\therefore$$
 Required result = $360 - 1 = 359$

$$\frac{120K+3}{9} = \frac{3K+3}{9}$$
 at $k = 2$,

$$\frac{3K+3}{9}$$
 \Rightarrow Remainder = 0

we get $120K + 3 = 120 \times 2 + 3 = 243$ which is the required number.

49. (b) LCM of (3, 5, 6, 8, 10, 12)
=
$$3 \times 5 \times 2 \times 4 = 120$$

Required number is

$$= \frac{120K+2}{22} = \frac{10K+2}{22}$$

at
$$k = 2, \frac{10K+2}{22} \Rightarrow Remainder = 0$$

The given condition satisfied = 120K + 2 = 240 + 2 = 242

50. (a)
$$307 - 3 = 304$$

$$330 - 7 = 323$$

 \Rightarrow HCF of (304, 323)

The greatest no. is = 19.

51. (d) Let HCF =
$$x$$

$$\therefore$$
 LCM = 84x

$$\therefore \text{ given HCF + LCM = } 84x + x = 680$$

$$85x = 680$$

$$x = 8$$

$$LCM = 84 \times 8 = 672$$

$$\Rightarrow$$
 56 × y = 672 × 8

$$y = \frac{672 \times 8}{56} = 96$$

52. (d) Let HCF =
$$x$$

$$\therefore$$
 LCM = 20x

sum of HCF + LCM = 2520

$$= x + 20x = 2520$$

$$21x = 2520$$

$$x = 120$$

$$LCM = 120 \times 20 = 2400$$

 \therefore one number = 480

Let another number = y

$$y \times 480 = 120 \times 2400$$

$$y = \frac{120 \times 2400}{480} = 600$$

53. (b) LCM of (12, 15, 18, 27)

$$\Rightarrow$$
 4 × 3 × 5 × 3 × 3 = 540

 \Rightarrow largest 4 digit number = 9999

on dividing by 540 to number

$$=\frac{9999}{540}$$

remainder is = 279

∴ Required number = 9999 – 279 = 9720

54. (d) 3026 – 11 = 3015

 \Rightarrow HCF (3015, 5040)

⇒ take difference between numbers. The HCF may be difference itself or may be a factor of this difference.

$$HCF = 45$$

55. (b)
$$110 - 2 = 108$$

$$128 - 2 = 126$$

$$\therefore$$
 HCF of (108, 126) = 18

56. (d) LCM of $(6, 9, 15, 18) = 3 \times 2 \times 3 \times 5$ = 90

> Required no. gives remainder 4 when divided by (6,9,15 and 18) and zero remainder when divided by '7'

$$\frac{90k+4}{7} = \frac{6K+4}{7}$$

at K = 4,
$$\frac{6K+4}{7}$$
 \Rightarrow remainder = 0

So, number is 90K + 4

$$= 90 \times 4 + 4 = 364$$

we get 364 which is the required no.

57. (b) LCM of (16, 24, 30, 36)

$$= 8 \times 2 \times 3 \times 5 \times 3 = 720$$

Largest 5 digit number is = 99999

divide 99999 by LCM (720)

$$=\frac{99999}{720}$$
, we get remainder = 639

So, The largest 5 digit number which divides completely the given number is

: required no. is 99360 + 10

= 99370

58. (b) LCM of (16, 20, 24) $= 8 \times 2 \times 5 \times 3$

multiply by 5×3 to make pair .. The least perfect square is

$$= 4 \times 4 \times 15 \times 15 = 3600$$

59. (b) LCM of (25, 50, 75) = $25 \times 2 \times 3$ = 150

> ⇒ Remainder when 43582 divided by 150

$$\frac{43582}{150}$$
, we get remainder = 82

⇒ Two possiblities are

$$=$$
 43582 $-$ 82 $=$ 43500

or

$$43582 + (150 - 82) = 43650$$

Nearest = **43650**

60. (a) HCF of (336, 240, 96)

$$HCF = 48$$

$$\therefore$$
 Stacks of english = $\frac{336}{48}$ = 7

stacks of maths =
$$\frac{240}{48}$$
 = 5

stacks of science =
$$\frac{96}{48}$$
 = 2

: total no. of stacks =
$$7 + 5 + 2 = 14$$

61. (a) Let numbers are

$$= 2x, 3x, 4x$$

given,LCM of
$$(2 \times 3 \times 2)x = 12x$$

$$12x = 240$$
 (given)

$$x = 20$$

$$\therefore$$
 numbers are = 2 × 20 = 40

$$4 \times 20 = 80$$

: smaller is 40

62. (c)
$$A + B = 45$$

$$A - B = \frac{45}{9} = 5$$

$$A = 25, B = 20$$

$$\therefore$$
 LCM of (25, 20) = $5 \times 5 \times 4 = 100$

63. (c)
$$HCF = 17$$

: Let numbers are

$$= 17x, 17y$$

LCM =
$$17xy = 714$$
 (given)

$$xy = 42$$

possible pairs are

(1, 42), (2, 21), (3, 14), (6, 7)

possible numbers are (17, 714), (34, 357), (51, 238), (102, 119)

but given that both numbers are of three digits

 \therefore numbers are = (102, 119)

: sum of numbers

$$= 102 + 119 = 221$$

64. (c) HCF = 15

Product of two numbers = 6300

 \therefore Let numbers are 15x, 15y

$$15x \times 15y = 6300$$
 (given)

$$xy = \frac{6300}{15 \times 15} = 28$$

possible pairs are = (1, 28), (7, 4)

Total pairs = 2

65. (b) LCM of (5, 10, 12, 15)
=
$$5 \times 2 \times 6 = 60$$

smallest no. divided by (5, 10, 12, 15)

leaves remainder 2 and when Divided by 7 leaves no

Remainder is
$$\frac{60\text{K}+2}{7} = \frac{4\text{K}+2}{7}$$

At k = 3,
$$\frac{4K+2}{7}$$
 \Rightarrow Remainder = 0

No. =
$$60K + 2 = 60 \times 3 + 2 = 182$$

$$= 3 \times 3 \times 10 = 90$$

$$\frac{1936}{90}$$
, remainder \Rightarrow 46

: Least number when is subtracted from 1936 which gives remainder 7 when divided by (9, 10,15) is

$$= (46 - 7) = 39$$

67. (a)
$$18 - 5 = 13$$

$$27 - 14 = 13$$

$$36 - 23 = 13$$

: LCM of (18, 27, 36) = $9 \times 2 \times 3 \times 2$

$$Rs. = 108$$

required number = 108 - 13 = 95

$$\Rightarrow$$
 8 × 3 × 4 × 3 × 2 = 576

required no is =
$$576 - 5 = 571$$

69. (c) Let the numbers are x and y respectively

$$\Rightarrow$$
 Let 3 m : 4m

$$\Rightarrow$$
 LCM = 3 × 4 × m = 240

(given)

$$\Rightarrow m = \frac{240}{12} = 20$$

: Numbers are =
$$A = 3 \times 20 = 60$$

 $B = 4 \times 20 = 80$

:. Least number is 60

70. (c) Let numbers are m and n $LCM \times HCF = 24$

$$LCM \times HCF = m \times n$$

$$\therefore 24 = m \times n, \text{ But m-n} = 2$$
given

so, such value is (6, 4) and greater no. = 6

71. (b HCF =
$$27$$

:. Let numbers are 27x and 27y respectively

$$27x + 27y = 216$$
 given

$$\Rightarrow$$
 $(x + y) = \frac{216}{27} = 8$

only possible factors are = (1, 7), (3, 5)

72. (a) Let HCF =
$$x$$

$$LCM = 44x$$

given HCF + LCM = 44x + x = 45x45x = 1125

$$x = \frac{1125}{45} = 25$$

$$\therefore$$
 HCF = 25,

$$LCM = 25 \times 44$$

⇒ also given that one number = 25 Let another number = y

$$\therefore 25y = 25 \times 25 \times 44$$

$$y = \frac{25 \times 25 \times 44}{25}$$

73. (d)Let No. are a and b

$$a \times b = 20736$$

we know that

$$(a \times b) = (HCF \times LCM)$$

$$LCM = \frac{20736}{54} = 384$$
74. (a) 12 - 2 = 10

$$16 - 6 = 10$$

$$24 - 14 = 10$$

LCM of (12, 16, 24) =
$$6 \times 2 \times 4 \times 1$$

= 48

greatest number of four digits = 9999

: When it is divided by 48 we get remainder = 15

⇒ The greatest number of 4 digits which completely divides the given number is

$$\therefore$$
 number is = 9984 - 10 = 9974

75. (a) LCM of (15, 20, 35)

$$= 5 \times 3 \times 4 \times 7 = 420$$

required number = 420 + 8 = 428

76. (d) Let the numbers are = 3x, 4x respectively

$$\therefore$$
 HCF = x

$$LCM = 3 \times 4 \times x = 12x$$

given that =
$$HCF \times LCM$$

$$= x \times 12x = 2028$$

$$12x^2 = 2028$$

$$x^2 = 169$$

$$x = 13$$

 $\therefore \text{ sum of numbers} = 3x + 4x = 7x$

$$= 7x = 7 \times 13 = 91$$

77. (c) HCF = 48

$$\Rightarrow 48x + 48y = 384$$

$$(x+y) = \frac{384}{48} = 8$$

so, possible pairs of co-prime no. are (1, 7), (3,5)

: numbers are (48, 336) or (144, 240)

: difference between numbers is

= 336 - 48

$$= 288$$
 and $240 - 144 = 96$

78. (c) Let numbers be 12x and 12y respectively

$$LCM = 12 xy$$

$$12xy = 1056$$
 (given)

$$xy = 88$$

∴ possible pairs are (1, 88) (8, 11) possible numbers are

given that one number is 132 so other is 96

79. (a) We, know that

$$\Rightarrow$$
 (a× b)= (HCF and LCM)

= (12, 1056)(96, 132)

$$396 \times 576 = HCF \times 6336$$

$$HCF = 36$$

80. (d) Product of numbers = 216 HCF = 6

$$LCM = \frac{216}{6} = 36$$

81. (b) LCM of (20, 28, 32, 35)

$$\Rightarrow$$
 4 × 5 × 7 × 8 = 1120

LCM = (20, 28, 32, 35) = 1120

1120 divided by 20, 28, 32,35 completely

 \therefore Let x be subtracted from 5834,

$$\therefore$$
 5834 – x = 1120

$$x = 5834 - 1120 = 4714$$

82. (d) LCM of (6, 12, 18)
LCM =
$$6 \times 2 \times 3 = 36$$

⇒ To find perfect square split the LCM into factors and make pair of factors so that it becomes the square.

$$\Rightarrow$$
 LCM = $2 \times 3 \times 2 \times 3 = 36$

$$2 \times 2 \times 3 \times 3 = 36$$

 \Rightarrow Which is already a perfect square

83. (c) Let numbers are = 3x & 4x respectively

: LCM of number = common factor (other factors) = $x \times 3 \times 4 = 12x$

$$12x = 84$$

$$x = 7$$

:. Numbers are = $3x = 7 \times 3 = 21$ $4x = 7 \times 4 = 28$

greater number is 28

84. (b)
$$HCF = 12$$

: Let numbers are 12x & 12y respectively

: Given that (12x + 12y) = 84

$$\Rightarrow x+y = \frac{84}{12} = 7$$

$$x + y = 7$$

 \Rightarrow possible number of pair are (1 + 6), (2 + 5), (3 + 4)

.. Total number of pair are 3

85. (c)
$$HCF = 3$$

: Let numbers are 3x & 3y respectively

$$LCM \Rightarrow 3xy = 105$$
 (given)

$$\Rightarrow xy = \frac{105}{3} = 35$$

 \Rightarrow also given = (3x + 3y) = 36

$$x + y = 12$$

: we required sum of reciprocals of numbers

$$\Rightarrow \frac{1}{3x} + \frac{1}{3y} = \frac{x+y}{3xy}$$

$$\Rightarrow \frac{12}{3 \times 35} = \frac{4}{35}$$

86. (c)
$$HCF = 12$$

: Let numbers are 12x & 12y respectively

$$LCM \Rightarrow 12xy = 924$$

$$(given) \Rightarrow xy = 77$$

 \Rightarrow possible pairs are

$$= (1 \times 77) (7 \times 11)$$

: only two pairs are possible

87. (a) LCM =
$$520$$

$$HCF = 4$$

one number = 52

Let other number is = y

$$52y = 4 \times 520$$

$$y = 40$$

88. (d) HCF = 96

$$LCM = 1296$$

one number = 864

Let other number is = x

$$\therefore 864 \times x = 96 \times 1296$$

$$x = 144$$

89. (b) Let HCF = x

$$\therefore$$
 LCM = 4x

: given HCF + LCM = 125

$$x + 4x = 125$$

$$5x = 125$$

$$x = 25$$

$$LCM = 4 \times 25$$

given one number = 100

$$\Rightarrow$$
 Let other number is = y

$$\Rightarrow$$
 100 y = 25 × 100

$$y = 25$$

Let number are 13x & 13y respectively

: also given $13x \times 13y = 2028$ $13 \times 13 \times xy = 2028$

$$xy = \frac{2028}{13 \times 13} = 12$$

:. Possible pairs are = (1, 12) (3, 4) only two pairs are possible

91. (d) LCM = 120

(given)

LCM is the product of one common factor and other different factors of the given numbers.

: factorize the given LCM = 120

$$= \frac{2 \times 2 \times 3 \times 5 \times 2}{4(3 \times 5 \times 2)}$$

= Here 4 is common factor (common factor is the HCF of the given number

$$\therefore$$
 HCF = 4

So, for the given numbers the HCF should be multiple of 4

⇒ Hence go through options which is not a multiple of 4 is 35 Hence answer is 35.

92. (d) LCM of (16, 18, 20, 25)

$$\Rightarrow$$
 4 × 4 × 9 × 5 × 5 = 3600

⇒ 3600 will be completely divisible by the given number so, 4 remainder obtained by adding '4' in the LCM

⇒ But it should not leave any remainder when divided by 7 So, given number should be

$$\Rightarrow \frac{(3600k + 4)}{7} = \frac{2K+4}{7}$$

$$\frac{2K+4}{7}$$
 at k = 5 remainder = 0

at given condition satisfy.

$$\Rightarrow$$
 No. = 3600K + 4 = 3600 × 5 + 4 = 18000 + 4 = 18004

 \Rightarrow 12 × 2 × 3 × 3 = 216 seconds

⇒ They will change simultaneously after every 216 seconds

$$\Rightarrow \frac{216}{60} \Rightarrow = 3\frac{36}{60}$$

= 3 minute 36 seconds

They change 1st at 10:15:00 am So, again they change at = 10:18:36 am

94. (b) For HCF of fractions take HCF of numerators and LCM of denominators

HCF of
$$3,5,6 = 1$$

LCM of
$$4,6,7 = 84$$

Hence, HCF of fractions = $\frac{1}{84}$

95. (a) LCM of (200, 300, 360, 450)

$$\Rightarrow$$
 10 × 4 × 5 × 3 × 3

= 1800 seconds

 \Rightarrow They meet at the starting point after every 1800 seconds

96. (b) LCM of (20, 30, 40)

$$\Rightarrow$$
 4 × 5 × 3 × 2 = 120 minutes

$$\Rightarrow \frac{120}{60} = 2 \text{ hours}$$

The 1st bell at 11 am.

So,

the again bell after 2 hours at $11 + 2 = 1 \,\mathrm{pm}$.

97. (c) Cows = 945, Sheep = 2475⇒ For largest flocks take HCF

⇒ 945 2475

⇒ For HCF take difference of number HCF will either be the difference or its factor

$$\Rightarrow 1530 = 17 \times 3 \times 3 \times 5 \times 2$$

$$= 17 \times 2 \times 45$$

HCF = 45

:. Maximum animals in each flock = 45

:. No. of flocks of cows are

$$=\frac{945}{45}=21$$

⇒ No. of flocks of sheep are

$$= \frac{2475}{45} = 55$$

Total number of flocks = 21 + 55**= 76** (45, 76)

98. (b) LCM of (10, 15, 20)

$$\Rightarrow$$
 5 × 2 × 3 × 2 = 60

⇒ Largest 4 digit number

= 9999

divide 9999 by LCM of given number

 \Rightarrow We get remainder = 39

⇒ So, to divide completely subtract it from

$$(9999 - 39) = 9960$$

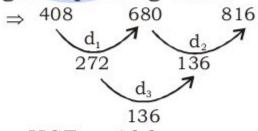
: 9960 is the largest four digit number which is completely divided by the given numbers

99. (c)
$$411 - 3 = 408$$

$$684 - 4 = 680$$

$$821 - 5 = 816$$

⇒ Take HCF of given number to get required greatest number



: HCF = 136

take difference of the numbers.

100. (b) HCF = 5

Ratio of numbers is (3:4) given

So, numbers are = 15 & 20

$$\therefore LCM = 5 \times 3 \times 4 = 60$$

given numbers are x & yrespectively.

(Product of numbers is \Rightarrow Product of LCM \times HCF)

$$\Rightarrow xy = AB$$

Now
$$\Rightarrow A + B = x + y$$
 (given)

Take cube on both sides

$$\Rightarrow (A + B)^3 = (x + y)^3$$

$$\Rightarrow$$
 A³ + B³ + 3AB (A + B)

$$= x^3 + y^3 + 3xy (x + y)$$

$$\Rightarrow$$
 A³ + B³ + 3xy (x + y)

$$= x^3 + y^3 + 3xy (x + y)$$

(Put AB = xy from above)

$$A^3 + B^3 = x^3 + y^3$$

102. (c) HCF = 44

$$LCM = 264$$

Let numbers are = x & y

$$\therefore \text{ Given = } \frac{x}{2} = 44$$

$$x = 88$$

$$y = \frac{\text{HCF} \times \text{LCM}}{x} \Rightarrow \frac{44 \times 264}{88} \Rightarrow \textbf{132}$$

103. (c) for minimum distance covered

$$= 9 \times 7 \times 10 \times 11 = 6930$$

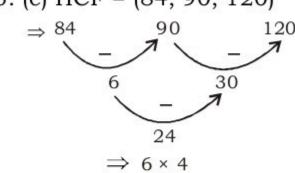
104. (d) for greatest number divide to take HCF

 $120 = 40 \times 3$

(for HCF take difference or take factor of difference)

$$HCF = 40$$

$$105.$$
 (c) HCF = $(84, 90, 120)$



$$HCF = 6$$

: Maximum no. of books in each stack = 6.

106. (b)
$$729 - 9 = 720$$

$$901 - 5 = 896$$

HCF (720, 896)

$$\Rightarrow$$
 HCF = 16

107. (a) HCF = 12

given ratio of numbers = A:B:C

 \therefore Numbers are = A = 12

$$B = 12 \times 2 = 24$$

$$C = 12 \times 3 = 36$$

108. (d) HCF = z

given ratio of the numbers

$$= x : y$$

$$\Rightarrow$$
 LCM = $z \times x \times y = xyz$

LCM is the product of HCF and other factors

109. (b) Let two consecutive positive even numbers

are
$$(2x + 2)$$
 and $(2x + 4)$

$$HCF = 2$$
 (given)

common (factor)

:. LCM =
$$2(x + 1)(x + 2)$$

HCF (other factors)

$$\Rightarrow$$
 LCM = 84 (given)

$$\therefore 2(x+1)(x+2) = 84$$
$$(x+1)(x+2) = 42$$

$$\Rightarrow x^2 + 3x + 2 = 42$$

$$x^2 + 3x + 2 - 42 = 0$$

$$x^2 + 8x - 5x - 40 = 0$$

$$\Rightarrow x(x+8) - 5(x+8) = 0$$

$$(x-5)(x+8) = 0$$

 $x = +5$

$$x = -8$$

But numbers are even, so (x = 5)

$$\therefore$$
 Numbers are = 2 × 5 + 2 = 12

and
$$2 \times 5 + 4 = 14$$

$$= 12 + 14 = 26$$

110. (b)
$$P = 2^3 \cdot 3^{10} \cdot 5$$

$$Q = 2^5 3.7$$

HCF(P, Q) = (common factor of $P & Q = 2^3.3$

111. (a) Let fraction is $\frac{x}{y}$

$$\therefore \frac{x-4}{y+1} = \frac{1}{6}$$
 (given)

⇒ cross multiply the equation

$$\Rightarrow$$
 6x - 24 = y + 1

$$6x - y - 25 = 0$$
(i)

again,
$$\frac{x+2}{y+1} = \frac{1}{3}$$

(given)

$$\Rightarrow 3x + 6 = y + 1$$

$$3x - y + 5 = 0$$
(ii)

From equation (i) and (ii)

$$6x - y = 25$$
$$3x - y = -5$$
$$x = 10$$

$$y = 35$$

$$\frac{x}{u} = \frac{10}{35} = \frac{2}{7}$$

Fraction =
$$\frac{x}{y} = \frac{2}{7}$$

numerator = 2

denominator = 7

LCM (numerator, denominator) $\Rightarrow 2 \times 7 = 14$

112. (b) HCF of fractional numbers is

$$\frac{\text{HCF of numerator}}{\text{LCM of denominator}}$$

$$\therefore$$
 HCF $\left(\frac{2}{3}, \frac{4}{5}, \frac{6}{7}\right)$

$$\Rightarrow \left(\frac{\text{HCF 2, 4, 6}}{\text{LCM 3, 5, 7}}\right)$$

$$=\frac{2}{3\times5\times7}=\frac{2}{105}$$

- 113. (b) for least or minimum number of canes we should have maximum capacity cans for required quantity
 - ⇒ For this we take HCF of given quantities.

$$HCF(21, 42, 63) = 21$$

- :. Maximum capacity of a can
- = 21 litres
- .. Number of cans of cow milk

$$=\frac{21}{21}=1$$

: Number of cans of toned milk

$$=\frac{42}{21}=2$$

: Number of cans of double toned milk

$$=\frac{63}{21}=3$$

.. Total number of cans

$$= 1 + 2 + 3 = 6$$

114. (c) G.C.D. = Greatest common divisor or Highest common factor (HCF)

Let
$$G.C.D. = a$$

 \therefore Let number are ax and ay (ax > ay)

$$LCM = axy$$

 \Rightarrow LCM = 2 × larger number

$$\therefore axy = 2 \times ax$$

$$y = 2$$

also given that

 \Rightarrow smaller number – G.C.D = 4

$$\Rightarrow$$
 ay - a = 4

$$2a - a = 4$$

$$a = 4$$

$$G.C.D = a = 4$$

$$y = 2$$

.: Smaller number

=
$$ay \Rightarrow 2 \times 4 = 8$$

115. (d) HCF (GCD) of a, b number is 12

and
$$a > b > 12$$
 (given)

- : smallest value of a & b are (36, 24)
- 116. (a) HCF of co prime number is always 1
 - \therefore Let numbers are = x & yrespectively

Product of number = xy

$$xy = 117$$

(given)

: Product of number = LCM × HCF

$$\Rightarrow$$
 LCM × 1 = 117

$$LCM = 117$$

- 117. (b) HCF = 12
 - :. Let numbers are 12x & 12y
 - Product of two number

$$= 12x \cdot 12y = 144xy$$

$$\Rightarrow 144xy = 2160$$

$$\Rightarrow xy = 15$$

- :. Possible pairs are (1, 15), (3,5), factors should be coprime. Two pairs are possible.
- 118. (c) LCM of (6, 7, 8, 9, 12)

$$LCM = 3 \times 2 \times 7 \times 4 \times 3 = 504$$

They will toll after every 504 seconds

119. (b) LCM of any fractions is

$$\Rightarrow \frac{\text{LCM of numerator}}{\text{HCF of denominator}}$$

$$\Rightarrow$$
 LCM $\left(\frac{2}{3}, \frac{4}{9}, \frac{5}{6}\right)$

$$\Rightarrow \frac{\text{LCM}(2,4,5)}{\text{HCF}(3,9,6)} = \frac{20}{3} \Rightarrow \frac{20}{3} \text{ ans.}$$

- 120. (c) LCM of 6, 9, 12, 15 and 18 = 180 If 180 is divided by these given number remainder will be 0
 - ⇒ To Leave the same remainder 2
 - ⇒ The number will be

121. (c)
$$x^6-1 \Rightarrow (x^2)^3-1^3$$

Using

$$\Rightarrow$$
 a³ - b³ = (a - b) (a² +b² + ab)

$$\Rightarrow$$
 $(x^2-1)(x^4+1+x^2\times1)$

$$\Rightarrow$$
 (x^2-1) $(x^4+1+x^2)...(i)$

Again,

$$x^4 + 2x^3 - 2x - 1$$

$$\Rightarrow x^4-1+2x(x^2-1)$$

$$\Rightarrow (x^2)^2 - 1^2 + 2x(x^2 - 1)$$

$$(x) = 1 + 2x(x - 1)$$

$$\Rightarrow (x^2-1)(x^2+1)+2x(x^2-1)$$

$$\Rightarrow$$
 (x^2-1) (x^2+1+2x)(ii)
 \Rightarrow from equation (i) and (ii)

HCF is a common term

$$HCF = (x^2 - 1)$$

122. (b) According to the question,

So, Factors of 1176 is 42,28

123. (c) LCM of 12, 16, 18, 21 = 1008 Next number = $1008 \times 2 = 2016$ Divisible by all

: 16 is added

Sum of digits = 1 + 6 = 7

124.(d) LCM of 5,6,7&8 = 840

$$\frac{840n+3}{9}$$

$$\Rightarrow \frac{3n+3}{9}$$

$$\Rightarrow$$
 Take n = 2

$$\Rightarrow$$
 3(2)+3

$$\Rightarrow \frac{9}{9}$$
 = Remainder = 0

- : Number is 840n+3
- \Rightarrow 840(2)+3[n=2]
- ⇒ 1683

Sum of digits = 18

125. (a)
$$\frac{\text{Remainder of no.}}{19} = \frac{47}{19}$$
$$= \lceil \text{Remainder=9} \rceil$$

126. (c) We know,

$$LCM \times HCF = Ist No. \times IInd No.$$

IInd No.
$$= 4K$$

$$K \times 4K = 21 \times 84$$

$$K = 21$$

Then No. =
$$21, 84$$

127. (b) According to the question,

$$L.CM = 12 H.C.F$$

$$H.C.F + 12 H.C.F = 403$$

$$13 \text{ H.C.F} = 403$$

$$H.C.F = 31$$

$$L.C.M = 372$$

$$\therefore L.C.M \times H.C.F = a \times b$$
$$372 \times 31 = 93 \times b$$

128. (a) According to question,

$$H.C.F = 9$$

 \Rightarrow Then the two numbers will be 9a, 9b

$$\Rightarrow$$
 9a + 9b = 99

$$\Rightarrow$$
 a + b = 11

- \Rightarrow Pairs of positive integer (1, 10), (2, 9), (3, 8), (4,7), (5, 6) = 5
- 129. (a) Let the ratio be = x
 - \Rightarrow Then two numbers will be 4x and 3x
 - \Rightarrow L.C.M. of number = 120
 - \Rightarrow L.C.M. of 4x and 3x = 12x

$$\Rightarrow$$
 So, $12x = 120$

$$x = 10$$

⇒ Therefore, the sum of number is

$$=4x+3x=7x$$

$$= 7 \times 10 = 70$$

130. (a) L.C.M of 12, 18, 21, 28 = 252

As, we know greatest four digit number = 9999

$$\begin{array}{c|c}
252 & 9999 \\
 & -756 \\
\hline
 & 2439 \\
 & -2268 \\
\hline
 & 171
\end{array}$$

= 9999 - 171

The number will be = 9828

- 131. (a) We know smallest five digit numbers is
 - = 10,000
 - \Rightarrow LCM of 12, 18, 21 = 252

$$\begin{array}{c|c}
252 & 10000 \\
 & 756 \\
\hline
 & 2440 \\
 & -2268 \\
\hline
 & 172
\end{array}$$

Difference \Rightarrow 252 - 172 = 80

 \Rightarrow Number should be = 10000 + 80

= 10080

- 132. (b) LCM of 30, 36, 80 = 720 Number = 720 × K + 11 (K = 2) Then number = 720 × 2 + 11
- = $1440 + 11 \Rightarrow 1451$ 133. (a) Greatest prime no.= 97

Least prime no. = 2So. their difference 97 - 2 = 95

(a) I CM of 10, 18, 01, 20 = 0016

- 134. (c) LCM of 12, 18, 21, 32 = 2016 2016 × K = 2016 × 2 = 4032 (K = 2)
 - "4032" is the number which is completely divided by 12, 18, 21, 32
- 135. (c)

$$\frac{\text{H.C.F}}{\text{L.C.M.}} = \frac{1}{30} \implies \frac{\text{H.C.F}}{\text{L.C.M}} = \frac{x \text{ (let)}}{30x}$$

$$L.C.M. - H.C.F = 493$$

$$30x - x = 493$$

$$29x = 493$$

$$x = 17$$

$$H.C.F = 17$$

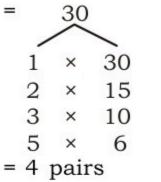
$$L.C.M = 510$$

$$L.C.M \times H.C.F = I^{st} \times II^{nd}$$

$$510 \times 17 = 17a \times 17b$$

ab = 30

Possible no. of pairs



136. (b) x, x+1, x+2, x+3Ist + IInd = IVth x + x + 1 = x + 3

$$x = 2$$

$$= 2 + 3 + 4 + 5 = 14$$

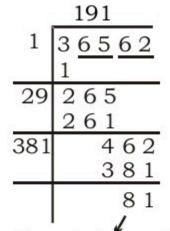
137.(d) 210 = 21 × 10 = 7 × 3 × 2 × 5 take 2 and 3 with together then we find number is 5, 6, 7 which is consecutive number so

$$I^{st} + II^{nd} = 5 + 6 = 11$$

138. (b) Time interval = 36, 40, 48 LCM of (36,40,48)sec = 720 sec

$$=\frac{720}{60}=12\min$$

- So, they will ring together after 12 min
- of same size will be H.C.F of 1.5 m and 1.2 m. So HCF of 1.5 and 1.2 is 3, then HCF of 1.5 and 1.2 is 0.3 m
- 140. (c) According to question,



Remaining solider

So After making 191 group of square 81 Men will be left.