Number System
Exercise 1A

Q1.

Answer :

(i) Nine thousand eighteen = 9018
(ii) Fifty-four thousand seventy-three = 54073
(iii) Three lakh two thousand five hundred six = 302506
(iv) Twenty lakh ten thousand eight = 2010008
(v) Six crore five lakh fifty-seven = 60500057
(vi) Two crore two lakh two thousand two hundred two = 20202202
(vii) Twelve crore twelve lakh twelve thousand twelve = 121212012
(viii) Fifteen crore fifty lakh twenty thousand sixty-eight = 155020068

Q2

Answer :

(i) 63,005 = Sixty-three thousand five
(ii) 7,07,075 = Seven lakh seven thousand seventy-five
(iii) 34,20,019 = Thirty-four lakh twenty thousand nineteen
(iv) 3,05,09,012 = Three crore five lakh nine thousand twelve
(v) 5,10,03,604 = Five crore ten lakh three thousand six hundred four
(vi) 6,18,05,008 = Six crore eighteen lakh five thousand eight
(vii) 19,09,09,900 = Nineteen crore nine lakh nine thousand nine hundred
(viii) 6,15,30,807 = Six crore fifteen lakh thirty thousand eight hundred seven
(ix) 6,60,60,060 = Six crore sixty lakh sixty thousand sixty

Q3

Answer :

(i) 15,768 = (1 x 10000) + (5 x 1000) + (7 x 100) + (6 x 10) + (8 x 1)

(ii) 3,08,927 = (3 x 100000) + (8 x 1000) + (9 x 100) + (2 x 10) + (7 x 1)

(iii) 24,05,609 = (2 x 1000000) + (4 x 100000) + (5 x 1000) + (6 x 100) + (9 x 1)

(iv) 5,36,18,493 = (5 x 10000000) + (3 x 1000000) + (6 x 100000) + (1 x 10000) + (8 x 1000) + (4 x 100) + (9 x 10) + (3 x 1)

(v) 6,06,06,006 = (6 x 10000000) + (6 x 100000) + (6 x 1000) + (6 x 1)

(iv) 9,10,10,510 = (9 x 10000000) + (1 x 1000000) + (1 x 10000) + (5 x 100) + (1 x 10)

Q4

Answer :

(i) 6 × 10000 + 2 × 1000 + 5 × 100 + 8 × 10 + 4 x 1 = 62,584

(ii) 5 × 100000 + 8 × 10000 + 1 × 1000 + 6 × 100 + 2 × 10 + 3 × 1 = 5,81,623

(iii) 2 × 10000000 + 5 × 100000 + 7 × 1000 + 9 × 100 + 5 × 1 = 2,05,07,905

(iv) 3 × 1000000 + 4 × 100000 + 6 × 1000 + 5 × 100 + 7 × 1 = 34,06,507

Q5

Answer :

The place value of 9 at ten lakhs place = 90 lakhs = 9000000
The place value of 9 at hundreds place = 9 hundreds = 900
∴ Required difference = (9000000 – 900) = 8999100

Q6

Answer :

The place value of 7 in 27650934 = 70 lakhs = 70,00,000
The face value of 7 in 27650934 = 7
∴ Required difference = (7000000 – 7) = 69,99,993

Q7

Answer :

The largest 6-digit number = 999999
The smallest 6-digit number = 100000
∴ Total number of 6-digit numbers = (999999 – 100000) + 1
= 899999 + 1
= 900000
= 9 lakhs

Q8

Answer :

The largest 7-digit number = 9999999
The smallest 7-digit number = 1000000
∴ Total number of 7-digit numbers = (9999999 - 1000000) + 1
= 8999999 + 1
= 9000000
= Ninety lakhs

Q9

Answer :

One lakh (1,00,000) is equal to one hundred thousand (100 × 1000).
Thus, one hundred thousands make a lakh.

Q10

Answer :

One crore (1,00,00,000) is equal to one hundred lakh (10,000 × 1,000).
Thus, 10,000 thousands make a crore.

Q11

Answer :

The given number is 738.
On reversing the digits of this number, we get 837.
∴ Required difference = 837 – 738 = 99

Q12

Answer :

The number just after 9547999 is 9547999 + 1 = 9548000.

Q13

Answer :

The number just before 9900000 is 9900000 – 1 = 9899999.

Q14

Answer :

The number just before 10000000 is 10000000 – 1 = 9999999.

Q15

Answer :

The 3-digit numbers formed by 2, 3 and 4 by taking each digit only once are 234, 324, 243, 342, 423 and 432.

Q16

Answer :

The smallest number formed by using each of the given digits (i.e, 3,1,0,5 and 7) only once is 10357.

Q17

Answer :

The largest number formed by using each of the given digits only once is 964320.

Q18

Answer :

Representation of the numbers on the international place-value chart:

Periods	**Millions**			**Thousands**			**Ones**		
Place	Hundred millions	Ten millions	Millions	Hundred thousands	Ten thousands	Thousands	Hundreds	Tens	Ones
	HM	TM	M	H Th	T Th	Th	H	T	O
(i)				7	3	5	8	2	1
(ii)			6	0	5	7	8	9	4
(iii)		5	6	9	4	3	8	2	1
(iv)		3	7	5	0	2	0	9	3
(v)		8	9	3	5	0	0	6	4
(vi)		9	0	7	0	3	0	0	6
		Crore	Ten lakhs	Lakhs	Ten Thousand	Thousand	Hundred	Tens	Ones

The number names of the given numbers in the international system:

(i) 735,821 = Seven hundred thirty-five thousand eight hundred twenty-one
(ii) 6,057,894 = Six million fifty-seven thousand eight hundred ninety-four
(iii) 56,943,821 = Fifty-six million nine hundred forty-three thousand eight hundred twenty-one
(iv) 37,502,093 = Thirty-seven million five hundred two thousand ninety-three
(v) 89,350,064 = Eighty-nine millions three hundred fifty thousand sixty-four
(vi) 90,703,006 = Ninety million seven hundred three thousand and six

Q19

Answer :

Periods	**Millions**			**Thousands**			**Ones**		
Place	Hundred millions	Ten millions	Millions	Hundred thousands	Ten thousands	Thousands	Hundreds	Tens	Ones
	HM	TM	M	H Th	T Th	Th	H	T	O
(i)		3	0	1	0	5	0	6	3
(ii)		5	2	2	0	5	0	0	6
(iii)			5	0	0	5	0	0	5

Number System
Exercise 1B

Q1

Answer :

$1003467 > 987965$

We know that a 7-digit number is always greater than a 6-digit number. Since 1003467 is a 7-digit number and 987965 is a 6-digit number, 1003467 is greater than 987965.

Q2

Answer :

$3572014 < 10235401$

We know that a 7-digit number is always less than an 8-digit number. Since 3572014 is a 7-digit number and 10235401 is an 8-digit number, 3572014 is less than 10235401.

Q3

Answer :

Both the numbers have the digit 3 at the ten lakhs places.
Also, both the numbers have the digit 2 at the lakhs places.
However, the digits at the ten thousands place in 3254790 and 3260152 are 5 and 6, respectively.
Clearly, $5 < 6$
$\therefore 3254790 < 3260152$

Q4

Answer :

Both have the digit 1 at the crores places.
However, the digits at the ten lakhs places in 10357690 and 11243567 are 0 and 1, respectively.
Clearly, $0 < 1$
$\therefore 10357690 < 11243567$

Q5

Answer :

27596381 > 7965412

We know that an 8-digit number is always greater than a 7-digit number. Since 7965412 is a 7-digit number and 27596381 is an 8-digit number, 27596381 is greater than 7965412.

Q6

Answer :

Both the numbers have the same digits, namely 4, 7, 8 and 9, at the crores, ten lakhs, lakhs and ten thousands places, respectively.
However, the digits at the thousands place in 47893501 and 47894021 are 3 and 4, respectively.
Clearly, 3 < 4
∴ 47893501 < 47894021

Q7

Answer :

102345680 is a 9-digit number.

63521047 and 63514759 are both 8-digit numbers.
Both the numbers have the same digits, namely 6, 3 and 5, at the crores, ten lakhs and lakhs places, respectively.
However, the digits at the ten thousands place in 63521047 and 63514759 are 2 and 1, respectively.
Clearly, 2 > 1
∴ 63521047 > 63514759

7355014 and 7354206 are both 7-digit numbers.
Both the numbers have the same digits, namely 7, 3 and 5 at the crores, ten lakhs and lakhs places, respectively.
However, the digits at the ten thousands place in 7355014 and 7354206 are 5 and 4, respectively.
Clearly, 5> 4
∴ 7355014 > 7354206

The given numbers in descending order are:
102345680 > 63521047 > 63514759 > 7355014 > 7354206

Q8

Answer :

23794206 and 23756819 are both 8-digit numbers.
Both the numbers have the same digits, namely 2, 3 and 7 at the crores, ten lakhs and lakhs places, respectively.
However, the digits at the ten thousands place in 23794206 and 23756819 are 9 and 5, respectively.
Clearly, 9 > 5
∴ 23794206 > 23756819

5032790 and 5032786 are both 7-digit numbers.
Both the numbers have the same digits, namely 5, 0, 3, 2 and 7, at the ten lakhs, lakhs, ten thousands, thousands and hundreds places, respectively.
However, the digits at the tens place in 5032790 and 5032786 are 9 and 8, respectively.
Clearly, 9 > 8
∴ 5032790 > 5032786

987876 is a 6-digit number.

The given numbers in descending order are:
23794206 > 23756819 > 5032790 > 5032786 > 987876

Q9

Answer :

16060666 and 16007777 are both 8-digit numbers.
Both the numbers have the same digits, namely 1, 6 and 0, at the crores, ten lakhs and lakhs places, respectively.
However, the digits at the ten thousands place in 16060666 and 16007777 are 6 and 0, respectively.
Clearly, 6 > 0
∴ 16060666 > 16007777

1808090 and 1808088 are both 7-digit numbers.
Both the numbers have the same digits , namely 1, 8, 0, 8 and 0, at the ten lakhs, lakhs, ten thousands, thousands and hundreds places, respectively.
However, the digits at the tens place in 1808090 and 1808088 are 9 and 8, respectively.
Clearly, 9 > 8
∴ 1808090 > 1808088

190909 and 181888 are both 6-digit numbers.
Both the numbers have the same digit, 1, at the lakhs place.
However, the digits at the ten thousands place in 190909 and 181888 are 9 and 8, respectively.
Clearly, 9 > 8
∴ 190909 > 181888

Thus, the given numbers in descending order are:
16060666 > 16007777 > 1808090 > 1808088 >190909 > 181888

Q10

Answer :

1712040, 1704382 and 1702497 are all 7-digit numbers.
The three numbers have the same digits, namely 1 and 7, at the ten lakhs and lakhs places, respectively.
However, the digits at the ten thousands place in 1712040, 1704382 and 1702497 are 1, 0 and 0.
∴ 1712040 is the largest.
Of the other two numbers, the respective digits at the thousands place are 4 and 2.
Clearly, 4 > 2
∴ 1704382 > 1702497

201200, 200175 and 199988 are all 6-digit numbers.
At the lakhs place, we have 2 > 1.
So, 199988 is the smallest of the three numbers.

The other two numbers have the same digits, namely 2 and 0, at the lakhs and ten thousands places, respectively.
However, the digits at the thousands place in 201200 and 200175 are 1 and 0, respectively.
Clearly, 1 > 0
∴ 201200 > 200175

The given numbers in descending order are:
1712040 > 1704382 > 1702497 > 201200 > 200175 > 199988

Q11

Answer :

990357 is 6 digit number.

9873426 and 9874012 are both 7-digit numbers.
Both the numbers have the same digits, namely 9, 8 and 7, at the ten lakhs, lakhs and ten thousands places, respectively.
However, the digits at the thousands place in 9873426 and 9874012 are 3 and 4, respectively.
Clearly, 4 < 7
∴ 9873426 < 9874012

24615019 and 24620010 are both 8-digit numbers.

Both the numbers have the same digits, namely 2, 4 and 6, at the crores, ten lakhs and lakhs places, respectively.
However, the digits at the ten thousands place in 24615019 and 24620010 are 2 and 1, respectively.
Clearly, 1 < 2
∴ 24615019 < 24620010

The given numbers in ascending order are:
990357 < 9873426 < 9874012 < 24615019 < 24620010

Q12

Answer :

5694437 and 5695440 are both 7-digit numbers.
Both have the same digit, i.e., 5 at the ten lakhs place.
Both have the same digit, i.e., 6 at the lakhs place.
Both have the same digit, i.e., 9 at the ten thousands place.
However, the digits at the thousand place in 5694437 and 5695440 are 4 and 5, respectively.
Clearly, 4 < 5
∴ 5694437 < 5695440

56943201, 56943300 and 56944000 are all 8-digit numbers.
They have the same digit, i.e., 5 at the crores place.
They have the same digit, i.e., 6 at the ten lakhs place.
They have the same digit, i.e., 9 at the lakhs place.
They have the same digit, i.e., 4 at the ten thousands place.
However, at the thousands place, one number has 4 while the others have 3 .
∴ 56944000 is the largest.

The other two numbers have 3 and 2 at their hundreds places.
Clearly, 2 <3
∴ 56943201 < 56943300

The given numbers in ascending order are:
5694437 < 5695440 < 56943201 < 56943300 < 56944000

Q13

Answer :

700087 is 6-digit number.

8014257, 8014306 and 8015032 are all 7-digit numbers.
They have the same digits, namely 8, 0 and 1, at the ten lakhs, lakhs and ten thousands places, respectively.
But, at the thousands place, one number has 5 while the other two numbers have 4.
Here, 801503 is the largest.
The other two numbers have 2 and 3 at their hundreds places.
Clearly, 2 < 3
∴ 8014306 < 8015032

10012458 is an 8-digit number.

The given numbers in ascending order are:
700087 < 8014257 < 8014306 < 8015032 < 10012458

Q14

Answer :

893245, 893425 and 980134 are all 6-digit numbers.
Among the three, 980134 is the largest.
The other two numbers have the same digits, namely 8, 9 and 3, at the lakhs, ten thousands and thousands places, respectively.
However, the digits at the hundreds place in 893245 and 893425 are 2 and 4, respectively.
Clearly, 2 < 4
∴ 893245 < 893425

1020216, 1020304 and 1021403 are all 7-digit numbers.
They have the same digits, namely 1, 0 and 2, at the ten lakhs, lakhs and ten thousands places, respectively.
At the thousands place, 1021403 has 1.
The other two numbers have the digits 2 and 3 at their hundreds places.
Clearly, 2 < 3
∴ 1020216 < 1020304

The given numbers in ascending order are:
893245 < 893425 < 980134 < 1020216 < 1020304 < 1021403

Number System
Exercise 1C

Q1

Answer :

Number of persons who visited the holy shrine in the first year = 13789509
Number of persons who visited the holy shrine in the second year = 12976498
∴ Number of persons who visited the holy shrine during these two years = 13789509 + 12976498 = 26766007

Q2

Answer :

Bags of sugar produced by the first factory in last year = 24809565
Bags of sugar produced by the second factory in last year = 18738576
Bags of sugar produced by the third sugar factory in last year = 9564568
∴ Total number of bags of sugar were produced by the three factories during last year = 24809565 + 18738576 + 9564568

= 53112709

Q3

Answer :

New number = Sum of 37684955 and 3615045
= 37684955 + 3615045
= 41300000

Q4

Answer :

Total number of votes received by the three candidates = 687905 + 495086 + 93756 = 1276747
Number of invalid votes = 13849
Number of persons who did not vote = 25467
∴ Total number of registered voters = 1276747 + 13849 + 25467
= 1316063

Q5

Answer :

People who had only primary education = 1623546
People who had secondary education = 9768678
People who had higher education = 6837954
Illiterate people in the state = 2684536
Children below the age of school admission = 698781
∴ Total population of the state = 1623546 + 9768678 + 6837954 + 2684536 + 698781
= 21613495

Q6

Answer :

Bicycles produced by the company in the first year = 8765435
Bicycles produced by the company in the second year = 8765435 + 1378689
= 10144124

∴ Total number of bicycles produced during these two years = 8765435 + 10144124
= 18909559

Q7

Answer :

Sale receipts of a company during the first year = Rs 20956480
Sale receipts of the company during the second year = Rs 20956480 + Rs 6709570
= Rs 27666050

∴ Total number of sale receipts of the company during these two years = Rs 20956480 + Rs 27666050
= Rs 48622530

Q8

Answer :

Total population of the city = 28756304
Number of males in the city = 16987059
∴ Number of females in the city = 28756304 – 16987059
= 11769245

Q9

Answer :

Required number = 13246510 – 4658642 = 8587868
∴ 13246510 is larger than 4658642 by 8587868.

Q10

Answer :

Required number = 1 crore – 564387
= 10000000 – 5643879
= 4356121

∴ 5643879 is smaller than one crore by 4356121.

Q11

Answer :

11010101 – required number = 2635967

Thus, required number = 11010101 – 2635967
= 8374134

∴ The number 8374134 must be subtracted from 11010101 to get 2635967.

Q12

Answer :

Sum of the two numbers = 10750308
One of the number = 8967519

∴ The other number = 10750308 – 8967519
= 1782789

Q13

Answer :

Initial amount with the man = Rs 20000000
Amount spent on buying a school building = Rs 13607085

∴ Amount left with the man = Rs 20000000 – Rs 13607085
= Rs 6392915

Q14

Answer :

Money need by the society to buy the property = Rs 18536000
Amount collected as membership fee = Rs 7253840
Amount taken on loan from the bank = Rs 5675450
Amount collected as donation = Rs 2937680

∴ Amount of money short = Rs 18536000 – (Rs 7253840 + Rs 5675450 + Rs 2937680)
= Rs 18536000 – Rs 15866970
= Rs 2669030

Q15

Answer :

Initial amount with the man = Rs 10672540
Amount given to his wife = Rs 4836980
Amount given to his son = Rs 3964790

∴ Amount received by his daughter = Rs 10672540 – (Rs 4836980 + Rs 3964790)
= Rs 10672540 – Rs 8801770
= Rs 1870770

Q16

Answer :

Cost of one chair = Rs 1485
Cost of 469 chairs = Rs 1485 × 469
= Rs 696465

∴ Cost of 469 chairs is Rs 696465.

Q17

Answer :

Contribution from one student for the charity program = Rs 625
Contribution from 1786 students = Rs 625 x 1786 = Rs 1116250

∴ Rs 1116250 was collected from 1786 students for the charity program.

Q18

Answer :

Number of screws produced by the factory in one day = 6985
Number of screws produced in 358 days = 6985 x 358
= 2500630

∴ The factory will produce 2500630 screws in 358 days.

Q19

Answer :

We know that
1 year = 12 months
13 years = 13 x 12 = 156 months

Now, we have:
Amount saved by Mr Bhaskar in one month = Rs 8756
Amount saved in 156 months = Rs 8756 × 156 = Rs 1365936

∴ Mr Bhaskar will save Rs 1365936 in 13 years.

Q20

Answer :

Cost of one scooter = Rs 36725
Cost of 487 scooter = Rs 36725 × 487
= Rs 17885075

∴ The cost of 487 scooters will be Rs 17885075.

Q21

Answer :

Distance covered by the aeroplane in one hour = 1485 km
Distance covered in 72 hours = 1485 km × 72 = 106920 km

∴ The distance covered by the aeroplane in 72 hours will be 106920 km.

Q22

Answer :

Product of two numbers = 13421408
One of the number = 364

∴ The other number = 13421408 ÷ 364
= 36872

Q23

Answer :

Cost of 36 flats = Rs 68251500
Cost of one flat = Rs 68251500 ÷ 36
= Rs 1895875

∴ Each flat costs Rs 1895875.

Q24

Answer :

We know that 1 kg = 1000 g
Now, mass of the gas-filled cylinder = 30 kg 250 g = 30.25 kg
Mass of an empty cylinder = 14 kg 480 g = 14.48 kg

∴ Mass of the gas contained in the cylinder = 30.25 kg – 14.48 kg
= 15.77 kg = 15 kg 770 g

Q25

Answer :

We know that 1 m = 100 cm
Length of the cloth = 5 m
Length of the piece cut off from the cloth = 2 m 85 cm

∴ Length of the remaining piece of cloth = 5 m – 2.85 m
= 2.15 m = 2 m 15 cm

Q26

Answer :

We know that 1 m = 100 cm
Now, length of the cloth required to make one shirt = 2 m 75 cm
Length of the cloth required to make 16 such shirts = 2 m 75 cm × 16
= 2.75 m × 16
= 44 m

∴ The length of the cloth required to make 16 shirts will be 44 m.

Q27

Answer :

We know that 1 m = 100 cm
Cloth needed for making 8 trousers = 14 m 80 cm
Cloth needed for making 1 trousers = 14 m 80 cm ÷ 8
= 14 .8 m ÷ 8
= 1.85 m = 1 m 85 cm

∴ 1 m 85 cm of cloth will be required to make one shirt.

Q28

Answer :

We know that 1 kg = 1000 g
Now, mass of one brick = 2 kg 750 g
∴ Mass of 14 such bricks = 2 kg 750 g × 14
= 2.75 kg × 14
= 38.5 kg = 38 kg 500 g

Q29

Answer :

We know that 1 kg = 1000 g
Now, total mass of 8 packets of the same size = 10 kg 600 g
∴ Mass of one such packet = 10 kg 600 g ÷ 8
= 10.6 kg ÷ 8
= 1.325 kg = 1 kg 325 g

Q30

Answer :

Length of the rope divided into 8 equal pieces = 10 m
Length of one piece = 10 m ÷ 8
= 1.25 m = 1 m 25 cm [∵ 1 m = 100 cm]

Number System
Exercise 1D

Q1

Answer :

(i) In 36, the ones digit is 6 > 5.
∴ The required rounded number = 40

(ii) In 173, the ones digit is 3 < 5.
∴ The required rounded number = 170

(iii) In 3869, the ones digit is 9 > 5.
∴ The required rounded number = 3870

(iv) In 16378, the ones digit is 8 > 5.
∴ The required rounded number = 16380

Q2

Answer :

(i) In 814, the tens digit is 1 < 5.
∴ The required rounded number = 800

(ii) In 1254, the tens digit is 5 = 5
∴ The required rounded number = 1300

(iii) In 43126, the tens digit is 2 < 5
∴ The required rounded number = 43100

(iv) In 98165, the tens digit is 6 > 5
∴ The required rounded number = 98200

Q3

Answer :

(i) In 793, the hundreds digit is 7 > 5
∴ The required rounded number = 1000

(ii) In 4826, the hundreds digit is 8 > 5
∴ The required rounded number = 5000

(iii) In 16719, the hundreds digit is 7 > 5
∴ The required rounded number = 17000

(iv) In 28394, the hundreds digit is 3 < 5
∴ The required rounded number = 28000

Q4

Answer :

(i) In 17514, the thousands digit is 7 > 5
∴ The required rounded number = 20000

(ii) In 26340, the thousands digit is 6 > 5
∴ The required rounded number = 30000

(iii) In 34890, the thousands digit is 4 < 5
∴ The required rounded number = 30000

(iv) In 272685, the thousands digit is 2 < 5
∴ The required rounded number = 270000

Q5

Answer :

57 estimated to the nearest ten = 60
34 estimated to the nearest ten = 30

∴ The required estimation = (60 + 30) = 90

Q6

Answer :

43 estimated to the nearest ten = 40
78 estimated to the nearest ten = 80
∴ The required estimation = (40 + 80) = 120

Q7

Answer :

14 estimated to the nearest ten = 10
69 estimated to the nearest ten = 70
∴ The required estimation = (10 + 70) = 80

Q8

Answer :

86 estimated to the nearest ten = 90
19 estimated to the nearest ten = 20
∴ The required estimation = (90 + 20) = 110

Q9

Answer :

95 estimated to the nearest ten = 100
58 estimated to the nearest ten = 60
∴ The required estimation = (100 + 60) = 160

Q10

Answer :

77 estimated to the nearest ten = 80
63 estimated to the nearest ten = 60
∴ The required estimation = (80 + 60) = 140

Q11

Answer :

356 estimated to the nearest ten = 360
275 estimated to the nearest ten = 280
∴ The required estimation = (360 + 280) = 640

Q12

Answer :

463 estimated to the nearest ten = 460
182 estimated to the nearest ten = 180
∴ The required estimation = (460 + 180) = 640

Q13

Answer :

538 estimated to the nearest ten = 540
276 estimated to the nearest ten = 280
∴ The required estimation = (540 + 280) = 820

Q14

Answer :

236 estimated to the nearest hundred = 200
689 estimated to the nearest hundred = 700
∴ The required estimation = (200 + 700) = 900

Q15

Answer :

458 estimated to the nearest hundred = 500
324 estimated to the nearest hundred = 300
∴ The required estimation = (500 + 300) = 800

Q16

Answer :

170 estimated to the nearest hundred = 200
395 estimated to the nearest hundred = 400
∴ The required estimation = (200 + 400) = 600

Q17

Answer :

3280 estimated to the nearest hundred = 3300
4395 estimated to the nearest hundred = 4400
∴ The required estimation = (3300 + 4400) = 7700

Q18

Answer :

5130 estimated to the nearest hundred = 5100
1410 estimated to the nearest hundred = 1400
∴ The required estimation = (5100 + 1400) = 6500

Q19

Answer :

10083 estimated to the nearest hundred = 10100
29380 estimated to the nearest hundred = 29400
∴ The required estimation = (10100 + 29400) = 39500

Q20

Answer :

32836 estimated to the nearest thousand = 33000
16466 estimated to the nearest thousand = 16000
∴ The required estimation = (33000 + 16000) = 49000

Q21

Answer :

46703 estimated to the nearest thousand = 47000
11375 estimated to the nearest thousand = 11000
∴ The required estimation = (47000 + 11000) = 58000

Q22

Answer :

Number of balls in box A = 54
Number of balls in box B = 79
Estimated number of balls in box A = 50
Estimated number of balls in box B = 80
∴ Total estimated number of balls in both the boxes = (50 + 80) = 130

Q23

Answer :

We have,
53 estimated to the nearest ten = 50
18 estimated to the nearest ten = 20
∴ The required estimation = (50 – 20) = 30

Q24

Answer :

100 estimated to the nearest ten = 100
38 estimated to the nearest ten = 40
∴ The required estimation = (100 – 40) = 60

Q25

Answer :

409 estimated to the nearest ten = 410
148 estimated to the nearest ten = 150
∴ The required estimation = (410 – 150) = 260

Q26

Answer :

678 estimated to the nearest hundred = 700
215 estimated to the nearest hundred = 200
∴ The required estimation = (700 – 200) = 500

Q27

Answer :

957 estimated to the nearest hundred = 1000
578 estimated to the nearest hundred = 600
∴ The required estimation = (1000 – 600) = 400

Q28

Answer :

7258 estimated to the nearest hundred = 7300
2429 estimated to the nearest hundred = 2400
∴ The required estimation = (7300 – 2400) = 4900

Q29

Answer :

5612 estimated to the nearest hundred = 5600
3095 estimated to the nearest hundred = 3100
∴ The required estimation = (5600 – 3100) = 2500

Q30

Answer :

35863 estimated to the nearest thousand = 36000
27677 estimated to the nearest thousand = 28000
∴ The required estimation = (36000 – 28000) = 8000

Q31

Answer :

47005 estimated to the nearest thousand = 47000
39488 estimated to the nearest thousand = 39000
∴ The required estimation = (47000 – 39000) = 8000

Number System
Exercise 1E

Q1

Answer :

38 estimated to the nearest ten = 40
63 estimated to the nearest ten = 60
∴ The required estimation = (40 × 60) = 2400

Q2

Answer :

54 estimated to the nearest ten = 50
47 estimated to the nearest ten = 50
∴ The required estimation = (50 × 50) = 2500

Q3

Answer :

28 estimated to the nearest ten = 30
63 estimated to the nearest ten = 60
∴ The required estimation = (30 × 60) = 1800

Q4

Answer :

42 estimated to the nearest ten = 40
75 estimated to the nearest ten = 80
∴ The required estimation = (40 × 80) = 3200

Q5

Answer :

64 estimated to the nearest ten = 60
58 estimated to the nearest ten = 60
∴ The required estimation = (60 × 60) = 3600

Q6

Answer :

15 estimated to the nearest ten = 20
34 estimated to the nearest ten = 30
∴ The required estimation = (20 × 30) = 600

Q7

Answer :

376 estimated to the nearest hundred = 400
123 estimated to the nearest hundred = 100
∴ The required estimation = (400 × 100) = 40000

Q8

Answer :

264 estimated to the nearest hundred = 300
147 estimated to the nearest hundred = 100
∴ The required estimation = (300 × 100) = 30000

Q9

Answer :

423 estimated to the nearest hundred = 400
158 estimated to the nearest hundred = 200
∴ The required estimation = (400 × 200) = 80000

Q10

Answer :

509 estimated to the nearest hundred = 500
179 estimated to the nearest hundred = 200
∴ The required estimation = (500 × 200) = 100000

Q11

Answer :

392 estimated to the nearest hundred = 400
138 estimated to the nearest hundred = 100
∴ The required estimation = (400 × 100) = 40000

Q12

Answer :

271 estimated to the nearest hundred = 300
339 estimated to the nearest hundred = 300
∴ The required estimation = (300 × 300) = 90000

Q13

Answer :

183 estimated upwards = 200
154 estimated downwards = 100
∴ The required product = (200 × 100) = 20000

Q14

Answer :

267 estimated upwards = 300
146 estimated downwards = 100
∴ The required product = (300 × 100) = 30000

Q15

Answer :

359 estimated upwards = 400
76 estimated downwards = 70
∴ The required product = (400 × 70) =28000

Q16

Answer :

472 estimated upwards = 500
158 estimated downwards = 100
∴ The required product = (500 × 100) = 50000

Q17

Answer :

680 estimated upwards = 700
164 estimated downwards = 100
∴ The required product = (700 × 100) = 70000

Q18

Answer :

255 estimated upwards = 300
350 estimated downwards = 300
∴ The required product = (300 × 300) = 90000

Q19

Answer :

356 estimated downwards = 300
278 estimated upwards = 300
∴ The required product = (300 × 300) = 90000

Q20

Answer :

472 estimated downwards = 400
76 estimated upwards = 80
∴ The required product = (400 × 80) = 32000

Q21

Answer :

578 estimated downwards = 500
369 estimated upwards = 400
∴ The required product = (500 × 400) = 200000

Number System
Exercise 1F

Q1

Answer :

87 ÷ 28 is approximately equal to 90 ÷ 30 = 3.

Q2

Answer :

The estimated quotient for 83 ÷ 17 is approximately equal to 80 ÷ 20 = 8 ÷ 2 = 4.

Q3

Answer :

The estimated quotient of 75 ÷ 23 is approximately equal to 80 ÷ 20 = 8 ÷ 2 = 4.

Q4

Answer :

The estimated quotient of 193 ÷ 24 is approximately equal to 200 ÷ 20 = 20 ÷ 2 = 10.

Q5

Answer :

The estimated quotient of 725 ÷ 23 is approximately equal to 700 ÷ 20 = 70 ÷ 2 = 35.

Q6

Answer :

The estimated quotient of 275 ÷ 25 is approximately equal to 300 ÷ 30 = 30 ÷ 3 = 10.

Q7

Answer :

The estimated quotient of 633 ÷ 33 is approximately equal to 600 ÷ 30 = 60 ÷ 3 = 20.

Q8

Answer :

729 ÷ 29 is approximately equal to 700 ÷ 30 or 70 ÷ 3, which is approximately equal to 23.

Q9

Answer :

858 ÷ 39 is approximately equal to 900 ÷ 40 or 90 ÷ 4, which is approximately equal to 23.

Q10

Answer :

868 ÷ 38 is approximately equal to 900 ÷ 40 or 90 ÷ 4, which is approximately equal to 23.

Number System
Exercise 1G

Q1

Answer :

We may write these numbers as given below:
(i) 2 = II
(ii) 8 = (5 + 3) = VIII
(iii) 14 = (10 + 4) = XIV
(iv) 29 = (10 + 10 + 9) = XXIX
(v) 36 = (10 + 10 + 10 + 6) = XXXVI
(vi) 43 = (50 - 10) + 3 = XLIII
(vii) 54 = (50 + 4) = LIV
(viii) 61= (50 + 10 + 1) = LXI
(ix) 73 = (50 + 10 + 10 + 3) = LXXIII
(x) 81 = (50 + 10 + 10 + 10 + 1) = LXXXI
(xi) 91 =(100 - 10) + 1 = XCI
(xii) 95 = (100 - 10) + 5 = XCV
(xiii) 99 = (100 - 10) + 9 = XCIX
(xiv) 105 = (100 + 5) = CV
(xv) 114 = (100 + 10) + 4 = CXIV

Q2

Answer :

We may write these numbers in Roman numerals as follows:

(i) 164 = (100 + 50 + 10 + 4) = CLXIV
(ii) 195 = 100 + (100 - 10) + 5 = CXCV
(iii) 226 = (100 + 100 + 10 + 10 + 6) = CCXXVI
(iv) 341= 100 + 100+ 100 + (50 -10) + 1 = CCCXLI
(v) 475 = (500 - 100) + 50 + 10 + 10 + 5 = CDLXXV
(vi) 596 = 500 + (100 - 10) + 6 = DXCVI
(vii) 611= 500 + 100 + 11 = DCXI
(viii) 759 = 500 + 100 + 100 + 50 + 9 = DCCLIX

Q3

Answer :

We can write the given Roman numerals in Hindu-Arabic numerals as follows:

(i) XXVII = 10 + 10 + 7 = 27
(ii) XXXIV = 10 + 10 + 10 + 4 = 34
(iii) XLV = (50 − 10) + 5 = 45
(iv) LIV = 50 + 4 = 54
(v) LXXIV = 50 + 10 + 10 + 4 = 74
(vi) XCI = (100 − 10) + 1 = 91
(vii) XCVI = (100 − 10) + 6 = 96
(viii) CXI = 100 + 10 + 1= 111
(ix) CLIV = 100 + 50 + 4 = 154
(x) CCXXIV = 100 + 100 + 10 + 10 + 4 = 224
(xi) CCCLXV = 100 + 100 + 100 + 50 + 10 + 5 = 365
(xii) CDXIV = (500 − 100) + 10 + 4 = 414
(xiii) CDLXIV = (500 − 100) + 50 + 10 + 4 = 464
(xiv) DVI = 500 + 6= 506
(xv) DCCLXVI = 500 + 100 + 100 + 50 + 10 + 6 = 766

Q4

Answer :

(i) VC is wrong because V, L and D are never subtracted.
(ii) IL is wrong because I can be subtracted from V and X only.
(iii) VVII is wrong because V, L and D are never repeated.
(iv) IXX is wrong because X (ten) must be placed before IX (nine).

Number System
Exercise 1H

Q1

Answer :

Option c is correct.

Place value of 6 = 6 lakhs = (6 × 100000) = 600000

Q2

Answer :

Option a is correct.

The face value of a digit remains as it is irrespective of the place it occupies in the place value chart.
Thus, the face value of 4 is always 4 irrespective of where it may be.

Q3

Answer :

Option c is correct.

Place value of 5 = 5 × 10000 = 50000
Face value of 5 = 5

∴ Required difference = 50000 − 5 = 49995

Q4

Answer :

Option b is correct.

The smallest counting number is 1.

Q5

Answer :

Option b is correct.

The largest four-digit number = 9999
The smallest four-digit number = 1000
Total number of all four-digit numbers = (9999 − 1000) + 1
= 8999 + 1
= 9000

Q6

Answer :

Option b is correct.

The largest seven-digit number = 9999999
The smallest seven-digit number = 1000000
Total number of seven-digit numbers = (9999999 − 1000000) + 1
= 8999999 + 1
= 9000000

Q7

Answer :

Option c is correct.

The largest eight-digit number = 99999999
The smallest eight-digit number = 10000000
Total number of eight-digit numbers = (99999999 − 10000000) + 1
= 89999999 + 1
= 90000000

Q8

Answer :

Option b is correct.

The number just before 1000000 is 999999 (i.e., 1000000 − 1).

Q9

Answer :

Option a is correct.

V, L and D are never subtracted. Thus, VX is wrong.

Q10

Answer :

Option c is correct.

I can be subtracted from V and X only. Thus, IC is wrong.