

CBSE Board
Class VI Mathematics
Term I
Sample Paper 2 – Solution

Time: 2 ½ hours

Total Marks: 80

Section A

1. Correct answer: B

Arrange the numbers in place-value chart:

Cr	T L	L	T Th	Th	H	T	O
4	7	8	9	6	3	0	4
4	7	8	9	6	3	4	0

Clearly both numbers have 8 digits.

At crores, ten lakhs, lakhs, ten thousands, thousands and hundreds place both have the same digits i.e. 4, 7, 8, 9, 6, 3 respectively.

But at tens place, first number has 0 and second number has 4.

Clearly, $0 < 4$

Hence

$$47896304 < 47896340$$

2. Correct answer: B

To add 0 and 4 on number line, move 4 steps to the right of 0.

3. Correct answer: D

Estimate the product by rounding off 52 to its nearest tens and 188 to its nearest hundreds.

52 can be rounded off to its nearest tens as 50 and 188 can be rounded off to its nearest hundreds as 200.

So, the required estimation of the product is $50 \times 200 = 10000$

4. Correct answer: A

Since,

$$\begin{array}{r|l} 2 & 36 \\ \hline 2 & 18 \\ \hline 3 & 9 \\ \hline 3 & 3 \\ \hline & 1 \end{array}$$

Therefore, $36 = 2 \times 2 \times 3 \times 3$

5. Correct answer: D

$$13 + (12 - 6 \times 3) = 13 + (12 - 18) = 13 - 6 = 7$$

6. Correct answer: B

NO and PQ can be extended indefinitely on both sides, so they are lines. On extending, it can be seen that they would meet at a point. Hence, they are intersecting lines.

7. Correct answer: B

The number just before 1000000 is one less than 1000000.

$$\text{The required number} = 1000000 - 1 = 999999.$$

8. Correct answer: B

On a number line, -110 lies next to -111 on the right.

Therefore, the successor of -111 is -110.

9. Correct answer: A

The given fraction is $\frac{15}{18}$

Dividing the numerator and denominator by 3, we get

$$\frac{15 \div 3}{18 \div 3} = \frac{5}{6}$$

Thus,

$\frac{15}{18}$ is equivalent to $\frac{5}{6}$.

10. Correct answer: D

The numbers 138 and 432 are divisible by both 2 and 3 and hence by 6.

The number 653 is neither divisible by 3 nor by 2 and hence not by 6.

Now, consider the number 531.

Since, the sum of the digits of the number 531 is divisible by 3, so 531 is divisible by 3.

But it is not an even number, so it is not divisible by 2.

Thus, 531 is divisible by 3 but not by 6.

11. Correct answer: B

$$\frac{1}{3} + \left(\frac{-1}{12}\right) = \frac{4 + (-1)}{12} = \frac{3}{12} = \frac{1}{4}$$

12. Correct answer: C

Every quadrilateral has four pairs of adjacent angles.

Example: For the quadrilateral ABCD, the pairs of adjacent angles are

(i) $\angle A, \angle B$ (ii) $\angle B, \angle C$ (iii) $\angle C, \angle D$ (iv) $\angle D, \angle A$.

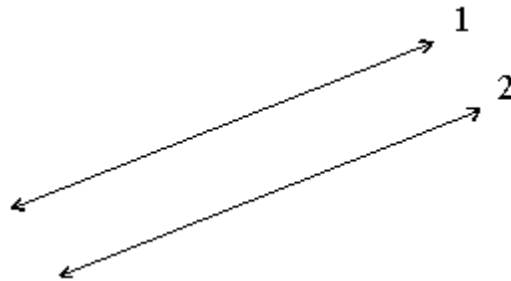
Section B

13.

	T Cr	Cr	T L	L	T Th	Th	H	T	O
(i)				7	0	7	0	7	5
(ii)		5	3	6	1	8	4	9	3

- i. Seven lakh seven thousand seventy five.
- ii. Five crore thirty-six lakh eighteen thousand four hundred ninety three.

14.



1. Two lines in the same plane which never intersect are called parallel lines.
2. Parallel lines remain the same distance apart over their entire length.

15.

- i. Going 6 m to the West
- ii. A withdrawal of Rs 100
- iii. 10 km below sea level
- iv. Spending Rs 500

16. Population of the village = 13295

Increase in population = Average growth - 1 = 399.

Population in the successive year = $13295 + 399 = 13694$

17.

5	455
7	91
13	13
1	

Prime factorisation of 455 is $5 \times 7 \times 13$

Therefore, the dimensions of the cuboid are 5 cm, 7 cm, 13 cm.

18. The opposite sides of a parallelogram are parallel and equal.

Therefore, $LM = NO$

$$\Rightarrow 2x + 2 = 40$$

$$\Rightarrow 2x = 38$$

$$\Rightarrow x = \frac{38}{2}$$

$$\Rightarrow x = 19$$

19. 90, 91, 92, 93, 94, 95, 96 are the required numbers.

20. Number of circles in step 1 = $3 = 1 \times 2 + 1$

Number of circles in step 2 = $5 = 2 \times 2 + 1$

Thus, we can observe that the number of circles is obtained by multiplying the step number by 2 and then adding 1.

Therefore, number of circles in the 100th step = $(100 \times 2) + 1 = 201$

- 21.

2	20570
5	10285
11	2057
11	187
17	17
	1

$$20570 = 2 \times 5 \times 11 \times 11 \times 17$$

22. Anna is 7 feet above sea level.

She jumps 3 feet down and walks another 2 feet down. Total distance travelled downwards = $3 + 2 = 5$ feet.

23. $(-13) + (-19) + (+15) + (-10)$

$$= -13 - 19 + 15 - 10$$

$$= -13 - 19 - 10 + 15$$

$$= -42 + 15$$

$$= -27$$

24. 21397 can be estimated as 21000

27807 can be estimated as 28000

42305 can be estimated as 42000

On adding, we get $21000 + 28000 + 42000 = 91000$

Section C

25. C stands for 100

D stands for 500

V stands for 5

I stands for 1

X stands for 10

M stands for 1000

In ascending order, the numbers can be arranged as

$$1 < 5 < 10 < 100 < 500 < 1000$$

Thus, the given roman numerals can be arranged in ascending order as

I, V, X, C, D, M

26. First we find the LCM of 48, 60, 72.

$$48 = 2 \times 2 \times 2 \times 2 \times 3$$

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

$$72 = 2 \times 2 \times 2 \times 3 \times 3$$

$$\text{LCM} = 2 \times 2 \times 2 \times 2 \times 3 \times 3 \times 5 = 720$$

Hence, they will meet after $\frac{720}{360} = 2$ rounds.

27. The given fractions are $\frac{1}{2}$, $\frac{2}{3}$, $\frac{5}{6}$ and $\frac{4}{9}$.

2	2	3	6	9
3	1	3	3	9
	1	1	1	3

$$\text{LCM of } 2, 3, 6, 9 = (2 \times 3 \times 3) = 18$$

So, we convert each of the given fractions into an equivalent fraction with 18 as the denominator.

Thus, we have:

$$\frac{1}{2} = \frac{1 \times 9}{2 \times 9} = \frac{9}{18}$$

$$\frac{2}{3} = \frac{2 \times 6}{3 \times 6} = \frac{12}{18}$$

$$\frac{5}{6} = \frac{5 \times 3}{6 \times 3} = \frac{15}{18}$$

$$\frac{4}{9} = \frac{4 \times 2}{9 \times 2} = \frac{8}{18}$$

Hence, the like fractions are $\frac{9}{18}$, $\frac{12}{18}$, $\frac{15}{18}$, $\frac{8}{18}$.

28. Temperature in the morning = -14°F

Drop in temperature is written as -7°F .

Temperature at present = $-14^{\circ}\text{F} + (-7^{\circ}\text{F})$

= $-14^{\circ}\text{F} - 7^{\circ}\text{F}$

= -21°F

29. Rs. 13550 estimated to nearest thousands = Rs. 14000

Rs. 26788 estimated to nearest thousands = Rs. 27000

Total estimated money (to be received) = Rs. $(14000 + 27000)$ = Rs. 41000

He has to pay Rs. 37000.

And $41000 > 37000$

Therefore, he will be able to pay to his supplier with the money received.

30.

a) ABCDE is a pentagon.

b) There are 5 pairs of adjacent sides as (i) AB, BC (ii) BC, CD (iii) CD, ED (iv) ED, EA (v) EA, AB

31. The angles are as shown below:

(i) Acute angles $\angle\text{KOL}$; $\angle\text{JOK}$; $\angle\text{NOM}$

(ii) Obtuse angles $\angle\text{NOK}$; $\angle\text{MOJ}$; $\angle\text{MOL}$

(iii) Straight angles - $\angle\text{NOL}$; $\angle\text{MOK}$

32.

2	33660
2	16830
3	8415
3	2805
5	935
11	187
17	17
1	

The prime factorization of 33,660 is $2 \times 2 \times 3 \times 3 \times 5 \times 11 \times 17$.

The difference between 17 and 2 is 15.

Section D

33. Number of slices of Jenny's pizza = 8

Number of slices Jenny ate = 3

Fraction of pizza Jenny ate = $\frac{3}{8}$

Number of slices of Danny's pizza = 4

Number of slices Danny ate = 3

Fraction of pizza Danny ate = $\frac{3}{4}$

We convert each one of $\frac{3}{8}$ and $\frac{3}{4}$ into an equivalent fraction having 8 as denominator.

Now,

$$\frac{3}{8} = \frac{3 \times 1}{8 \times 1} = \frac{3}{8} \text{ and } \frac{3}{4} = \frac{3 \times 2}{4 \times 2} = \frac{6}{8}$$

Clearly, $\frac{3}{8} < \frac{6}{8}$

Hence, $\frac{3}{8} < \frac{3}{4}$

Therefore, Danny ate more pizza.

34.

$$\begin{aligned} \text{(i)} \quad & (74 \times 126) - (74 \times 32) + (74 \times 16) \\ &= 74 \times (126 - 32 + 16) \\ &= 74 \times 110 \\ &= 8140 \end{aligned}$$

$$\begin{aligned} \text{(ii)} \quad & (1000 + 8) \times 721 \\ &= 1000 \times 721 + 8 \times 721 \\ &= 721000 + 5768 \\ &= 726768 \end{aligned}$$

35.

$$\begin{aligned} & \overline{13+5} + \left[100 \div 10 + \left\{ 15 \times 2 \left(\overline{13-9} \div \overline{4-1} \right) \right\} \right] \\ &= 18 + [100 \div 10 + \{15 \times 2(4 \div 3)\}] \\ &= 18 + [100 \div 10 + \{15 \times 2 \times \frac{4}{3}\}] \\ &= 18 + [100 \div 10 + \{5 \times 2 \times 4\}] \\ &= 18 + [100 \div 10 + 40] \\ &= 18 + [10 + 40] \\ &= 18 + 50 \\ &= 68 \end{aligned}$$

36.

(i) $-52, -36, 42, 8, -22, 46$
 $= (-52) + (-36) + 42 + 8 + (-22) + 46$
 $= -(52 + 36 + 22) + (42 + 8 + 46)$
 $= -110 + 96$
 $= -14$

(ii) The largest 4-digit positive integer and the smallest 3-digit negative integer are shown below:

The two integers are 9999 and -999, respectively.

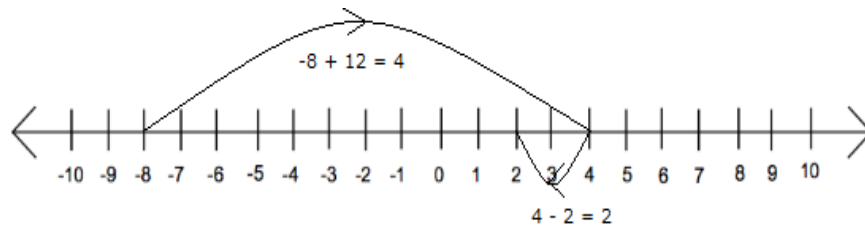
$$9999 + (-999) = 9999 - 999 = 9000$$

(iii) Two integers between 2 and -5 that are inverses of each other.

The two integers are -1 and 1.

The sum of 1 and -1 is 0.

37. To solve using the number line start with -8, move 12 steps right and then back 2 steps as shown below:



So, we reach at 2; therefore, $(-8 + 12 - 2) = 2$

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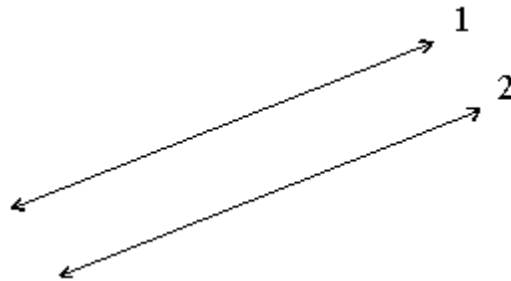
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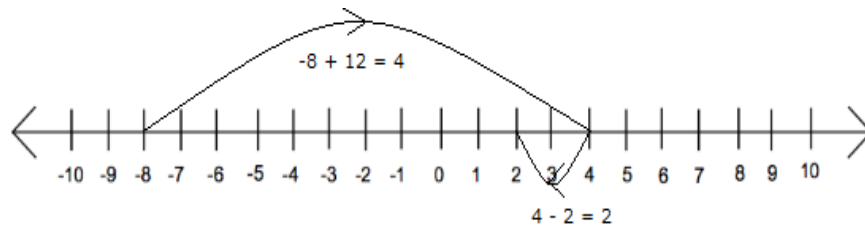
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