CBSE Board Class VI Mathematics Term I Sample Paper 3 – Solution

Time: 2 ¹/₂ hours

Total Marks: 80

Section A

- Correct answer: D
 One crore can be written as 1,00,00,000.
 One thousand can be written as 1000.
 So, 10000 times one thousand would make one crore.
- 2. Correct answer: A
 There are 1000 + 1 = 1001 whole numbers upto 1000.
 i.e. 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, ..., 1000
- Correct answer: C
 (-42) + (-35) = -42 − 35 = -77
- 4. Correct answer: BFifth multiple of 18 = 18 × 5 = 90
- 5. Correct answer: A

$$3\frac{1}{3} = 3 + \frac{1}{3} = \frac{10}{3}$$

6. Correct answer: B

The English alphabet Z represents an open curve.

7. Correct Answer: C

(-2) - (-5)

Subtracting a negative integer means adding its positive integer.

 \therefore (-2) - (-5) = (-2) + 5 = 3

8. Correct Answer: C

The numbers 3, (-3), 2, 0 and (-4) can be arranged in the ascending order as (-4), (-3), 0, 2, 3

The numbers lying to the left of the number are smaller than those lying to its right.

Also zero is smaller than every positive number and greater than every negative number.

9. Correct Answer: D

$$5\frac{1}{5} + 4\frac{2}{5}$$
$$= \frac{26}{5} + \frac{22}{5}$$
$$= \frac{26 + 22}{5}$$
$$= \frac{48}{5}$$
$$= 9\frac{3}{5}$$

10. Correct Answer: B

One and only one line passes through any two given points.

11. Correct Answer: D

A right angle measures 90°.

12. Correct Answer: B The smallest whole number is 0.

Section **B**

13. (i) -9 > -15

(ii) -10 < 10

- (iii) 0 < 3
- (iv) -28 < 17

14. Measure of \angle UVW = 90°, measure of \angle XYZ = 49°.

Measure of \angle UVW > measure of \angle XYZ

 $\therefore \angle UVW$ is the bigger of the two angles.



- 15. The number 1 is neither a prime number nor a composite number.
- 16. Numbers to the left of zero are: -9, -28, -100, -4, -1, -48, -95. Numbers to the right of zero are: +5, +81, +1, +72, +65.
- 17. A triangle has 6 exterior angles in all.
- 18. Arrange the numbers 78712354 and 78721124 in place-value chart:

Cr	L	L	TTh	Th	Н	Т	0
7	8	7	1	2	3	5	4
7	8	7	2	1	1	2	4

Clearly both numbers have 8 digits.

At crores place both have the same digit, i.e. 7.

At ten lakhs place both have the same digit, i.e. 8.

At lakhs place both have the same digit, i.e. 7.

But at ten thousands place, first number has 1 and second number has 2.

Clearly, 2 > 1.

Hence 78721124 > 78712354

Total ingredients purchased = $\frac{2}{5}$ kg sugar + $\frac{1}{3}$ kg rice 2 1

$$=\frac{2}{5}+\frac{1}{3}$$

L.C.M. of the denominators 5 and 3 is 15

$$\Rightarrow \text{Total ingredients purchased} = \frac{(2 \times 3)}{(5 \times 3)} + \frac{(1 \times 5)}{(3 \times 5)}$$
$$= \frac{6}{15} + \frac{5}{15}$$
$$= \frac{6 + 5}{15}$$
$$= \frac{11}{15}$$

20.

- (a) Going 6 m to the West
- (b) A withdrawal of Rs. 100
- (c) 10 km below sea level
- (d) Spending Rs. 500
- 21. A cube and a trapezium prism have the same number of faces, vertices and edges.Both have 6 faces, 8 vertices, and 12 edges.



22. Given number is 1258. Its unit digit is 8, which is divisible by 2. So, 1258 is divisible by 2.

Sum of its digits = 1 + 2 + 5 + 8 = 16, which is not divisible by 3. So, 1258 is not divisible by 3.Because 1258 is divisible by 2 but not by 3, it is not divisible by 6.

19.

23. Minu's growth = $\frac{3}{5}^{\text{th}}$ of an inch Her brother's growth = $\frac{2}{5}^{\text{th}}$ of an inch Difference in the growth of Minu and her brother = $\frac{3}{5} - \frac{2}{5} = \frac{3-2}{5} = \frac{1}{5}$ So, Minu grew $\frac{1}{5}^{\text{th}}$ of an inch more than her brother.

24.

- (a) 35° Acute angle because the measure is less than 90° .
- (b) 185° Reflex angle because the measure is greater than 180° and less than 360°.
- (c) 90° An angle with measure of 90° is a right angle.
- (d) 92° An obtuse angle because the measure is greater than 90° and less than 180°.

Section C

25. LCM of 12 and $16 = (4 \times 3 \times 4) = 48$

So, we convert each one of $\frac{7}{12}$ and $\frac{9}{16}$ into an equivalent fraction having 48 as denominator.

$$\frac{7}{12} = \frac{7 \times 4}{12 \times 4} = \frac{28}{48} \text{ and } \frac{9}{16} = \frac{9 \times 3}{16 \times 3} = \frac{27}{48}$$

Clearly, $\frac{28}{48} > \frac{27}{48}$
Hence, $\frac{7}{12} > \frac{9}{16}$

26. Each of the 8 vertices of the cube has now been replaced by three vertices of a triangle.

So, there are now 24 vertices. The cube had 6 square faces.

Now, those faces are still there but have become octagons.

Additionally, there are now 8 new triangular faces.

So, there is a total of 14 faces.

27. Step Distribution of 1st Boy = 63 cm
Step Distribution of 2nd Boy = 70 cm
Step Distribution of 3rd Boy = 77 cm
LCM of 63, 70, 77 can be calculated as follows:

2	63, 70, 77	
3	63, 35, 77	
3	21, 35, 77	
5	7, 35, 77	
7	7, 7, 77	
11	1, 1, 11	
	1, 1, 1	

 $LCM = 2 \times 3 \times 3 \times 5 \times 7 \times 11 = 6930$

Hence the minimum distance each should cover so that all can cover the distance in complete steps is 6930 cm.

- 28. The angles are as shown below:
 - (a) Acute angles: ∠KOL; ∠JOK; ∠NOM
 - (b) Obtuse angles: ∠NOK; ∠MOJ; ∠MOL
 - (c) Straight angles: ∠NOL; ∠MOK
- 29. Old position = -300 feet below sea level

Ascend in position = 900 feet

Change in position is given by -300 + 900.

To find this, start with -300 and move 9 steps to the right as the gap between steps is 100.



After moving, we reach at 600 i.e. -300 + 900 = 600 feet Thus, Rocky is 600 feet above sea level. 30. The digit in the unit place of 378 is 8.

According to the test for divisibility by 2, 278 is divisible by 2.
The sum of the digits of 378 = 3 + 7 + 8 = 18 and 18 is divisible by 3 and 9.
Hence, according to the test for divisibility by 3 and 9, 378 is divisible by 3 and 9.
378 is divisible by 3 and 9.
378 is divisible by 2 and 3. Hence, 378 is divisible by 6.

- 31. (i) $\triangle ABC$, $\triangle ABO$, $\triangle ACO$, $\triangle BOC$
 - (ii) $\triangle OAC$, $\triangle OAB$, $\triangle OBC$
 - (iii) ΔΑΟΒ, ΔΑΟϹ, ΔΑΒϹ
- 32. 4,89,348 48,365

Rounding off to hundred, 489348 and 48365 may be rounded off to 489300 and 48400 respectively.

489300

- 48400

440900

Rounding off to tens, 489348 and 48365 may be rounded off to 489350 and 48370 respectively.

Section D

- 33. (a) Lines p, q and r are intersecting lines.
 - (b) Point at which the lines meet is called the point of intersection. The point O represents the point of intersection.
 - (c) Infinite number of lines can pass through the point O (point of intersection).



34. We have three numbers 2261, 3059 and 3325

$2261\overline{\smash{\big)}3059}(1$ -2261 $798)2261(2$ -1596 $665)798(1$ -665 $133)665(5$ -665 0	133)3325(25 <u>-266</u> 665 <u>-665</u> 0
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HCF of 2261 and 3059 = 133 Hence, HCF of 2261, 3059 and 3325 is 133.

35. Homework completed in the morning = $\frac{1}{5}$ Homework completed in the afternoon = $\frac{2}{7}$ Homework completed during the day = $\frac{1}{5} + \frac{2}{7}$ L.C.M. of 5 and 7 = 35 \Rightarrow Homework completed during the day = $\frac{7}{35} + \frac{10}{35} = \frac{17}{35}$ Richa completed $\frac{17}{35}^{th}$ of the total homework. Fraction of homework incomplete = $1 - \frac{17}{35} = \frac{35 - 17}{35} = \frac{18}{35}$ Therefore, $\frac{18}{35}^{th}$ of the total homework is incomplete. 36.

- (i) The points which are in the exterior of the circle are Points A, C and D. The points which are in the interior of the circle are Points B and O.
- (ii) The radii of the circle are Line segments OP, OS, OT, OQ and OR.
- (iii) The diameter of the circle is Line segment ST.
- (iv) The chords of the circle are Line segments ST and QR.
- 37. For the fractions $\frac{2}{3}$, $\frac{1}{6}$, $\frac{5}{9}$ and $\frac{7}{12}$ we find the L.C.M of its denominator.

L.C.M. of 3, 6, 9, 12 = (3 × 2 × 3 × 2) = 36

So, we convert each of given fractions into an equivalent fraction having 36 as the denominator.

Now,

 $\frac{2}{3} = \frac{2 \times 12}{3 \times 12} = \frac{24}{36}$ $\frac{1}{6} = \frac{1 \times 6}{6 \times 6} = \frac{6}{36}$ $\frac{5}{9} = \frac{5 \times 4}{9 \times 4} = \frac{20}{36}$ $\frac{7}{12} = \frac{7 \times 3}{12 \times 3} = \frac{21}{36}$ Clearly, $\frac{6}{36} < \frac{20}{36} < \frac{21}{36} < \frac{24}{36}$ Hence, $\frac{1}{6} < \frac{5}{9} < \frac{7}{12} < \frac{2}{3}$.

The given fractions in the ascending order are $\frac{1}{6}, \frac{5}{9}, \frac{7}{12}, \frac{2}{3}$.