



# UNIFIED COUNCIL

An ISO 9001:2008 Certified Organisation



## UNIFIED CYBER OLYMPIAD - □ \_ □ ◀ (LEVEL - 2)

### Solutions for class : 6

#### Mental Ability

1. (A)

x	y	Equation
-2	-6	$y = -6 \Rightarrow y = 3 \times (-2) = 3x$
-1	-3	$y = -3 \Rightarrow y = 3 \times (-1) = 3x$
0	0	$y = 0 \Rightarrow y = 3 \times (0) = 3x$
1	3	$y = 3 \Rightarrow y = 3 \times (1) = 3x$
2	6	$y = 6 \Rightarrow y = 3 \times (2) = 3x$

∴ The equation satisfied by all the given values of 'x' and 'y' in the table is  $y = 3x$ .

2. (C)

$$6\frac{3}{4} = 3\frac{1}{4} + \boxed{?} \times \frac{1}{2}$$

$$\text{So, } 6\frac{3}{4} - 3\frac{1}{4} = \boxed{?} \times \frac{1}{2}$$

$$\Rightarrow \frac{27}{4} - \frac{13}{4} = \boxed{?} \times \frac{1}{2}$$

$$\Rightarrow \frac{14}{4} \times 2 = \boxed{?}$$

$$\Rightarrow \boxed{?} = \frac{14}{2} = 7$$

∴ The missing number in the box is **7**.

3. (C)

Volumes of the given figures:

(A)  $4 \times 5 \times 1 = 20$  cu. cm

(B)  $4 \times 4 \times 4 = 64$  cu. cm

(C)  $8 \times 8 \times 8 = 512$  cu. cm

(D)  $2 \times 2 \times 7 = 28$  cu. cm

**Clearly, the solid in option (C) has the maximum capacity.**

4. (A)

Present age of Ved = 20 years

Present age of Vicky =  $(20 - 5)$  years

= 15 years

According to the problem,

(Giri's present age + 3) + (Ved's present age + 3) + (Vicky's present age + 3) = 70 years

= (Giri's present age + 3) + 23 + 18 = 70

= Giri present age

=  $(70 - 23 - 18 - 3)$  years

=  $(70 - 44)$  years

= 26 years

∴ **Giri's present age = 26 years**

5. (A)

Let  $(a + b) = 6k$ ,  $(b + c) = 7k$  and

$(c + a) = 8k$ , where 'k' is some constant.

Then  $a + b + b + c + c + a = 6k + 7k + 8k$

Then,  $2(a + b + c) = 21k \Rightarrow 2 \times 14 = 21k$

$$\Rightarrow k = \frac{28}{21} = \frac{4}{3}$$

$$\Rightarrow (a + b) = \left(6 \times \frac{4}{3}\right) = 8$$

$$\therefore c = (a + b + c) - (a + b) = (14 - 8) = 6$$

6. (D)

A's marks =  $(13 \times 5 + 7 \times (-2))$

$$= 65 - 14 = 51$$

B's marks =  $(9 \times 5 + 11 \times (-2))$

$$= 45 - 22 = 23$$

∴ Sum of the marks of A and B =  $51 + 23 = 74$ .

7. (B)

Given that the ratio of perimeters of the square and rectangle is 4 : 3, we get

$$4(s) : 2(l + b) = 4 : 3$$

$$\Rightarrow 2(7) : (7 + b) = 4 : 3$$

$$\Rightarrow 14 : (7 + b) = 4 : 3$$

Product of means = Product of extremes

$$\Rightarrow 4(7 + b) = 14 \times 3$$

$$\Rightarrow b = \frac{14 \times 3}{4} - 7$$

$$= \frac{21}{2} - 7 = \frac{21 - 14}{2}$$

$$= \frac{7}{2} = 3\frac{1}{2}$$

$\therefore$  Breadth of the rectangular field

$$= 3\frac{1}{2} \text{ m}$$

8. (C) Amount to be charged on Aman's first month phone usage

$$= ₹(151 \times 0.05 + 200 \times 0.07 + 32 \times 0.12)$$

$$= ₹(7.55 + 14 + 3.84)$$

$$= ₹ 25.39$$

9. (A) Time by Tanvi's watch = 10: 00 a.m.

$$11 \text{ minutes after } 10: 00 \text{ a.m.} = 10: 11 \text{ a.m.}$$

Her watch is 6 minutes fast

$$\Rightarrow \text{Actual time at which the car leaves}$$

$$= 10: 11 \text{ a.m.} - 6 \text{ minutes}$$

$$= 10: 05 \text{ a.m.}$$

10. (D) According to the given graph, it is clear that Team 2 won more games each year than in the previous year.

11. (C) The number of students who took more than 3 hours to do the homework = 6

Total number of students = 30

$\therefore$  The required percentage

$$= \frac{6}{30} \times 100\% = 20\%$$

12. (C) H.C.F. of given fractions

$$= \frac{\text{H.C.F. of } 2, 8, 16, 10}{\text{L.C.M. of } 3, 9, 81, 27} = \frac{2}{81}$$

13. (B) Area of rectangle = 64 sq. m.

$$64 = 1 \times 64$$

$$2 \times 32$$

$$4 \times 16$$

$$8 \times 8$$

Hence, 4 different rectangles can be drawn, as  $64 \times 1$ ,  $32 \times 2$ ,  $16 \times 4$  are rectangles with different dimensions but are congruent to the ones given above.

5	30, 40, 45
3	6, 8, 9
2	2, 8, 3
	1, 4, 3

L.C.M. of 30, 40 and 45 =

$$5 \times 3 \times 2 \times 4 \times 3 = 360$$

Hence, the least length of a school working day = 360 minutes = **6 hours**.

15. (B) Given X is the product of 4 and 5

$$\Rightarrow X = 4 \times 5 = 20 \text{ (According to rule 1.)}$$

Y is 7 times 2

$$\Rightarrow Y = 7 \times 2 = 14$$

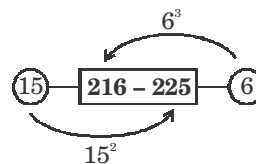
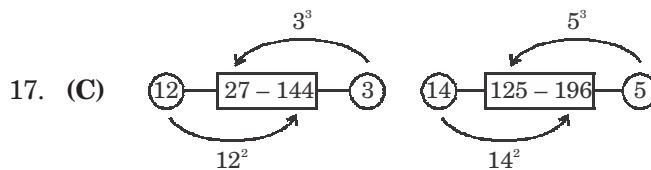
According to the rule 2, sum of X and Y is XY

$\therefore$  Sum of 20 and 14 = **2014**

### Reasoning



Alternate figures are with a rotation of  $180^\circ$ .



18. (C) The figure rotates  $90^\circ$  CW and number of dots also rotate clockwise.

i.e.  $1 \rightarrow 2$        $2 \rightarrow 3$        $3 \rightarrow 1$

19. (B) 

6	7	8	9	4
H	D	F	C	K

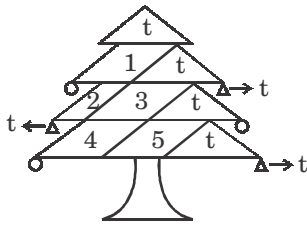
1	2	3	5
R	S	N	L

F	C	N	H	R
8	9	3	6	1



21. (A) The second figure in the first pair is obtained by flipping the complete triangle and giving the same shade in both the triangles. Similarly, the second figure in the second pair is obtained by flipping the hexagon and giving the same shade as in option (A).

22. (B) The names of the shapes in the given figure, that begin with T are triangle (t) and trapezium.



The trapeziums in the given figure are

$$1 + t, 3 + t, 5 + t, 2 + 3 + t, 4 + 5 + t$$

$$\text{Number of trapeziums} = 3 + 1 + 1 = 5$$

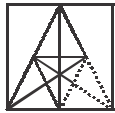
In the given figure, the number of triangles = 7

$$\therefore \text{Their sum} = 7 + 5 = 12.$$

(OR)

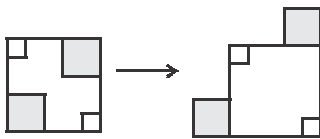
In the given figure, the no. of triangles is 7 and the no. of trapeziums is 5. Their sum is 12.

23. (C)



24. (D) Sector means 'a part / division'.

25. (B)

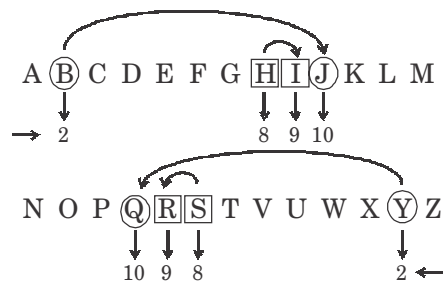


26. (B) (i) Except (B) all other figures have even number of sides.

(ii) The small squares in the mesh of options (A), (C) and (D) are more than their respective number of sides, while in option (B) the number of small squares in the mesh is equal to the number of sides.

27. (A) Shade is interchanged in the mirror image of the given object.

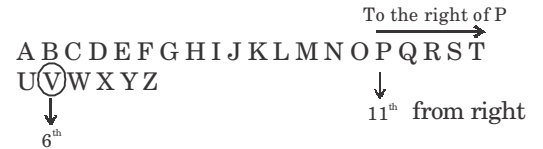
28. (C)



29. (A) Z Q S T L R M N Q N R T U V X R L T A S  
L T Q R S L T

There is only one L which does not have R preceding it and also T following it.

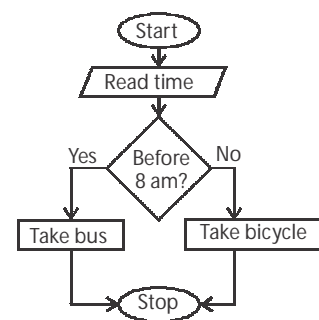
30. (B)



### Computers

31. (B) In PowerPoint, a file which contains ready made styles that can be used for a presentation is called template.
32. (C) Ctrl + Home command brings you to the first slide of a MS-PowerPoint presentation.
33. (B) In order to replace a particular word use find and replace function to find incorrect word and replace it, with the correct one.
34. (D) Apple has developed Macintosh in the fourth generation of computers.
35. (C) Steps followed to insert sounds in a PowerPoint presentation are Insert → Sound → Sound from file.
36. (A) The handle labelled 1 is used for the rotation of figure 1 to form the figure 2.
37. (D) In MS-Excel, A2:A12 represents the range of cells in column A and rows 2 through 12.
38. (B) U.S. Army formed the project of ENIAC to calculate the ballistic course of shells.
39. (D) A red line under the words in an MS-Word document represents spelling mistake.
40. (B) The worksheet which is currently in use is called an active worksheet.
41. (A) Input device converts the data or instructions given to a computer into electrical signals.

42. (B)



43. (B) The files which have .pps as file extension are non-editable files in MS-PowerPoint.
44. (D) ISP-Internet Service Provider
45. (B) Formula bar displays the contents of an active cell.

**English**

46. (B) "He tried to get up, but could not," is the correct sentence.

Incorrect

(A)

(C)

(D)

Correct form

Both mother and father are at home.

You mut start at once or you will not be there in time.

I tried my best but lost the prize.

47. (D) 'Abstemious' means 'eating or drinking sparingly'.

48. (C) Congruous × Incongruous

49. (A) 'Intersede' is spelt incorrectly. The correct spelling is 'intercede'.

50. (D) The word that can be formed using the letters of 'Teetotaler' is 'Rotate'.

