



**UNIFIED COUNCIL**

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## NATIONAL LEVEL SCIENCE TALENT SEARCH EXAMINATION

Paper Code: **UN439 (UPDATED)**

Solutions for Class : 3

### MATHEMATICS

1. (A)  $A + B + B + 4 \text{ g} = 24 \text{ g}$   
 $A + B + B = 24 - 4 = 20 \text{ g}$   
 $A = B + B = 20 \div 2 = 10 \text{ g}$   
 $\therefore$  The mass of B is  $10 \text{ g} \div 2 = 5 \text{ g}$
2. (D)  $4630 \div 2 = 2315$   
 $4630 \div 5 = 926$   
 $\therefore$  The missing digit is 0.
3. (B)  $7 \times 8 = 56$  ;  $4 \times 6 = 24$  ;  
 $56 + 24 = 80$
4. (B) Cost of 3 oranges =  $2 \times$  cost of 3 apples  
3 oranges cost ₹  $(36 \times 2) = ₹ 72$   
9 oranges cost ₹  $(72 \times 3) = ₹ 216$
5. (D)  $7 \triangle 4 \times 8 = \triangle 112$  ;  
 $\triangle \times \triangle = 6 \times 6 = 36$
6. (A) The cost of 3 ice-creams  
 $= ₹ 30$   
 $\therefore$  The cost of an ice-cream  
 $= ₹ 30 \div 3 = ₹ 10$   
The cost of a cherry = ₹  $(28 - 2 \times 10) = ₹ 8$   
The cost of a banana  
 $\frac{₹ (18 - 8)}{2} = \frac{10}{2} = ₹ 5$
7. (A) 3 out of 10 parts of the figure are shaded. So, the fraction represented by the shaded part is  $\frac{3}{10}$ .

8. (C) The cost of 4 spoons = ₹ 6.40

$$\text{The cost of 1 spoon} = \frac{6.40}{4} = ₹ 1.6$$

$$\text{The cost of 3 forks} = ₹ 5.40$$

$$\text{The cost of 1 fork} = \frac{5.40}{3} = ₹ 1.8$$

$$1.8 - 1.6 = ₹ 0.2$$

Fork cost is ₹ 0.2 more than a spoon

9. (D) From above chart we can say that numbers in decreasing order are: 9980 > 9890 > 9809 > 9089

Place value chart

Th	H	T	O
9	8	9	0
9	8	0	9
9	9	8	0
9	0	8	9

$\therefore$  Answer is option (D).

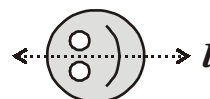
10. (B) Raj ate half of the cake  $\Rightarrow$  Remaining  
 $= \frac{1}{2}$  cake which is the cut into 8 equal parts.

$$\therefore \text{Each part} = \frac{1}{2} \div 8 = \frac{1}{16}$$

Raj gave 3 pieces to his friends.

$\therefore$  The fraction of the cake remaining with him = 5 pieces of  $\frac{1}{16}$  cake =  $\frac{5}{16}$

11. (B) Line 'm' divides the figure into two equal parts.



$\therefore$  Answer is option (B).

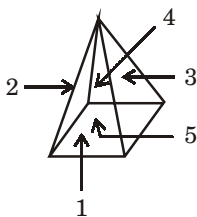
12. (C) 
$$\begin{array}{l} \text{Shaded} \rightarrow 4 \\ \text{Unshaded} \rightarrow 4 \\ \hline \text{Total} \rightarrow 8 \end{array} \quad \text{Fraction} = \frac{4}{8} = \frac{1}{2}$$

13. (A) Marbles in bag P = 7862.  
Marbles in bag Q = 3962.  
2375 marbles were taken from P and put into Q.

$\therefore$  Marbles in P =  $(7862 - 2375) = 5487$   
Marbles in Q =  $(3962 + 2375)$   
So, more marbles in  
Q =  $6337 - 5487 = 850$

14. (C) Cost of 2 pens = ₹ 12  
 $\Rightarrow$  Cost of 1 pen = ₹ 6  
Cost of (pen + pencil) = ₹ 10  
 $\Rightarrow$  Cost of 1 pencil =  $10 - 6 = ₹ 4$   
Now, cost of Book + Pencil = ₹ 16  
 $\Rightarrow$  Cost of Book =  $16 - 4 = ₹ 12$

15. (C) No. of faces = 5



16. (A) Cost of each adult ticket = ₹ 10  
Cost of each child ticket = ₹ 4  
 $\therefore$  Total cost of tickets for 4 adults and 3 children = ₹  $(4 \times 10 + 3 \times 4) = ₹ 52$

17. (D)  $320 + 320 + x = 987$   
 $987 - 640 = 347 \text{ m}$

18. (C)  $10 \times ₹ 0.01 + 12 \times ₹ 0.25 + 2 \times ₹ 0.50$   
 $= ₹ 1 + ₹ 3 + ₹ 1 = ₹ 5$

19. (C) Distance between two flag posts  
 $= (7 - 0) \text{ m} = 7 \text{ m}$   
Distance between 2<sup>nd</sup> flag post and 16<sup>th</sup> flag post  
 $= (16 - 2) \times 7 \text{ m} = 14 \times 7 \text{ m} = 98 \text{ m}$


20. (B) Time when Ali left home = 9:00 am  
Time spent in walking to Sam's house = 15 min.  
Time spent at Sam's house = 2 hour 15 min.

Time spent in coming back to home = 15 min.

So, total time taken = 15 minutes + 2 hours 15 minutes + 15 minutes = 2 hours 45 minutes

$\therefore$  Time when Ali arrived back home = 9 : 00 am + 2 hour 45 minutes  
 $= 11:45 \text{ a.m.}$

Which is equal to quarter to 12.

21. (B)  in this figure there are 10 sides.

22. (B)  $186 > 110$  and  $110 < 121$

$\therefore 186 > 110 < 121$

23. (D) While comparing like fractions, the fractions with the smallest numerator is the smallest.

24. (C)  $\frac{7 \times 5}{8 \times 5} = \frac{35}{40}$ ;  $\frac{7 \times 2}{8 \times 2} = \frac{14}{16}$ ;

and  $\frac{7 \times 9}{8 \times 9} = \frac{63}{72}$

25. (C) Cost of 1 apple = ₹  $18 \div 2 = ₹ 9$   
Cost of 5 apples = ₹  $9 \times 5 = ₹ 45$

26. (C) 6 minutes 51 seconds  
 $= (6 \times 60 + 51) \text{ seconds}$   
 $= 360 + 51 \text{ seconds}$   
 $= 411 \text{ seconds}$

27. (D)  $\star = 90 \div 2 = 45$

$\star - 30 = \square$

$45 - 30 = 15 = \square = 15$

28. (A) The capacity of a glass = 540 ml

$\therefore$  The capacity of 9 such glasses  
 $= 540 \text{ ml} \times 9 = 4860 \text{ ml}$   
 $= 4 \text{ l } 860 \text{ ml}$

29. (B) Amount before going shopping = ₹ 40  
Amount after shopping = ₹ 13

$\therefore$  Amount spent = ₹  $(40 - 13)$   
 $= ₹ 27$   
 $= ₹ 12 + ₹ 15$

$\therefore$  Things bought are sketch pens and play dough.

30. (C) The required no. of people who went to the music stall =  $217 - 13 = 204$
31. (C) In the given series numbers are increasing by 5  
2105, 2110, 2115, 2120, 2125, 2130
32. (A) Packages of balloons = 25  
each package has 4 balloons  
Balloons buy in all =  $25 \times 4$
33. (C) Total number of books are 20  
 $10 \times 2 = 20$
34. (B)  $1 \times 2 \times 72 = 144$   
 $1 + 2 + 72 = 75$
35. (Del)
36. (C) Two Jeans pant = 800  
Amount paid by each =  $800/2 = 400$
37. (D) 620 minutes = 6 hours 20 minutes  
20 minutes are remaining when expressed in hours and minutes
38. (A) Weight of 4 tomatoes = 2 kg  
weight of 1 tomato =  $2/4 = 1/2 = 0.5$   
weight of 10 tomatoes =  $10 \times 0.5 \text{ kg} = 5 \text{ kg}$ .
- 39 (A) Glasses of water is required to fill the bucket =  $3 \times 8 = 24$
- 40 (D)  $5 \times 3 = 15$

#### GENERAL SCIENCE

41. (A) Mangroves grow in swamps. To get air they develop aerial roots.
42. (B) Microscope is used to observe microorganisms like germs.
43. (C) Organic bags like jute bag is good for environment as it can be reduced and becomes soil.
44. (C) Animals in group P and Q are classified according to the food they eat.
45. (C) Bean plant is a climber. Climbers are the plants with weak stems.
46. (B) A rat gnaws its food.
47. (A) Woodpeckers are known as tapping on tree trunks in order to find insects living in crevices. Its beak acts as chisel and crow bar.
48. (D) White colour skin or fur best blends in snowy regions.
49. (B) Ostrich is a flightless bird.
50. (B) The moon reflects sunlight at night.
51. (A) Cotton plant is a shrub and grape is a climber.
52. (D) An umbrella, raincoat and fishing net are made of nylon.
53. (B) A thermometer is used to know or measure the temperature of the body.
54. (B) Water from the soil is absorbed by the roots of plants.
55. (D) The layers of soil are topsoil, subsoil and bedrock soil.
56. (D) Liquids have no definite shape but have fixed volume. Containers Q = 6 l, S = 5 l, T = 4 l. Total 15 litres in which Sania poured the orange juice.
57. (A) Rubber is a plant product.
58. (A) The lungs of birds are called airsacs. Air sacs supply oxygen.
59. (A) In the given flow chart 'X' is fruit. A flower develops into fruit, produces seeds and grows into young plant.
60. (C) An owl is a nocturnal bird.
61. (D) It is easy to shift circuses made of cloth tents from one place to another.
62. (B) In the given table P, Q, R materials are grouped on the basis of their sources. P is plant, Q is animal, R is synthetic. Milk is an animal product that can be placed under heading Q.
63. (B) Sparrow is a perching bird.
64. (B) Air is needed for burning.
65. (D) A climber coils around the stems of other plants for support and to get sunlight.
66. (A) X is earthworm. Earthworm is a living thing.
67. (C) Sense organs are called gateways of knowledge.

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| <p>68. <b>(D)</b> P in the given figure is wind pipe.</p> <p>69. <b>(D)</b> Frog is an animal. Animals move from place to place.</p> <p>70. <b>(B)</b> Arboreal habitat is tree dwelling. Aerial habitat is related to air.</p> <p>71. <b>(C)</b> Solid → liquid → gas.</p> <p>72. <b>(A)</b> When light is blocked by a piece of cardboard a shadow is formed.</p> <p>73. <b>(C)</b> To reduce the loss of water leaves of plants in desert are reduced to spins.</p> | <p>74. <b>(D)</b> 'P' in the given figure represents evaporation.</p> <p>75. <b>(D)</b> Plant, man and earthworm breathe.<br/>Plant – pores<br/>Earthworm – Skin<br/>Man – Lungs.</p> |
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===== *The End* =====