



UNIFIED COUNCIL

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NATIONAL LEVEL SCIENCE TALENT SEARCH EXAMINATION - 2013

SOLUTIONS FOR CLASS : 3

Mathematics

1. (A) 1 week = 7 days
 \therefore 7 weeks = $7 \times 7 = 49$ days
 So, 7 weeks 6 days = $(49 + 6) = 55$ days.
2. (B) $48 \div 6 = 8$
 $63 \div 7 = 9$
 $56 \div 8 = 7$
 $36 \div 9 = 4$
 $9 > 8 > 7 > 4$. So, $63 \div 7$ has the greatest quotient.
3. (C) Total length of the ribbon = 1370 cm
 Length of the ribbon needed to decorate a gift = 35 cm.
 No. of gifts decorated = 8
 \therefore Length of the ribbon used = $35 \times 8 = 280$ cm
 Length of the remaining ribbon
 $= (1370 - 280) \text{ cm} = 1090 \text{ cm}$
 $100 \text{ cm} = 1 \text{ m}$
 $\therefore 1090 \text{ cm} = 10 \text{ m } 90 \text{ cm}$
4. (A) 3 out of 10 parts of the figure are shaded.
 So, the fraction represented by the shaded part is $\frac{3}{10}$.
5. (D) $746 > 647 > 467$
 $\therefore 746, 647, 467$ is the required arrangement of numbers from the greatest to the smallest.
6. (B)
$$\begin{array}{r} 4 \square 8 \\ \times 9 \\ \hline 3672 \end{array}$$

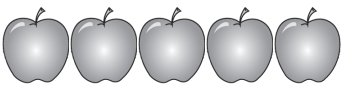


 \therefore The missing number is 0.
7. (A) Quarter to 3 is 2:45 which is shown by the clock in option (A).
8. (D) $570 + 430 = 1000 = 100 \times 10 = 100 \text{ tens}$
9. (B) Raj ate half of the cake \Rightarrow Remaining = $\frac{1}{2}$ cake which is the cut into 8 equal parts.
 \therefore Each part = $\frac{1}{2} \div 8 = \frac{1}{16}$
 Raj gave 3 pieces to his friends.
 \therefore The fraction of the cake remaining with him = 5 pieces of $\frac{1}{16}$ cake = $\frac{5}{16}$
10. (A) From the given equation (ii), $\bigcirc = 1$.
 From equation (i), $\square = 7$
 $\therefore \square \times \bigcirc = \square$ is correct as
 $7 \times 1 = 7$
11. (C) 8 hundreds = 800. 3 nines = $3 \times 9 = 27$.
 \therefore 3 nines less than 8 hundreds = 27 less than 800 = $800 - 27 = 773$.
12. (C) The fractions shaded in the given figures are :
 $\frac{11}{2}$ in (A); $\frac{2}{3}$ in (B); $\frac{13}{2}$ in (C) and $\frac{11}{2}$ in (D)
 $\frac{13}{2}$ is the greatest of all the fractions. So, the figure in (C) has the greatest area shaded.
13. (D)
$$\begin{array}{r} 7)458(65 \rightarrow Q \\ \underline{42} \\ 38 \\ \underline{35} \\ 3 \rightarrow R \end{array}$$

 \therefore The required difference is $Q - R = 65 - 3 = 62$.
14. (A) Remaining amount = Amount with Venu - Total amount spent on different days.
 $= ₹ [252 - (43 + 43 \times 2 + 98)]$
 $= ₹ [252 - (43 + 86 + 98)]$
 $= ₹ [252 - 227] = ₹ 25$
15. (B) No. of girls who took part in the singing competition = 4233

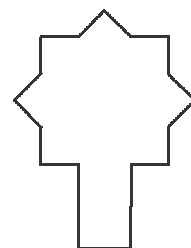
$$\text{No. of boys} = 4233 - 1029 = 3204$$

Total no. of participants

$$= 4233 + 3204 = 7437$$

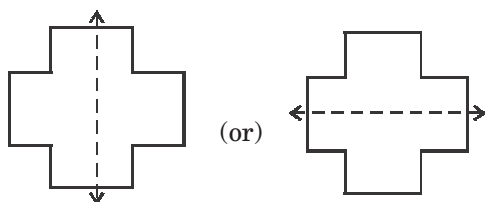
16. (D) $3400 \text{ ones} = 3400 = 340 \times 10 = 340 \text{ tens}$
 $= 34 \times 100 = 34 \text{ hundreds}$
 So, $3400 \text{ ones} = 340 \text{ tens} = 34 \text{ hundreds}$
 \therefore (i), (iii) and (iv) are equal.
17. (C) No. of computers sold in the three months
 $= 756 + 1005 + 483 = 2244$.
18. (B) The no. of 9's in $1539 = 1539 \div 9 = 171$.
19. (A) Routes from Bhanu's house to swimming pool:
 (i) Direct route : 1100 m
 (ii) Through the school : $359 \text{ m} + 723 \text{ m} = 1082 \text{ m}$
 (iii) Through the supermarket : $451 \text{ m} + 688 \text{ m} = 1139 \text{ m}$
 $1139 > 1100 > 1082$
 \therefore If Bhanu takes the longest route, he would travel 1139 m.
20. (B) 10 apples weigh as much as 2 melons
 \Rightarrow 5 apples weigh as much as 1 melon.
 \therefore 25 apples weigh as much as 5 melons.
21. (C)
- | Thousands | Hundreds | Tens | Ones |
|-----------|----------|------|------|
| 1 | 9 | 3 | 8 |
- 1 is in the thousands place and so 1 has the highest place value.
22. (A) No. of biscuits in each box = Total no. of biscuits \div Total number of boxes.
 $= 360 \div 12 = 30$.
23. (D) 
 stands for 50 apples.
 So, each  stands for $50 \div 5 = 10$ apples.
 \therefore 
 stand for $8 \times 10 = 80$ apples.
24. (B) Total weight of the fruits and the basket = Reading on the scale = 6 kg 600 g = 6600 g
 Weight of the basket = 1725 g
 \therefore Weight of the fruits = $(6600 - 1725) \text{ g} = 4875 \text{ g} = 4 \text{ kg } 875 \text{ g}$
25. (A) No. of words typed in 5 minutes = 120
 \therefore No. of words typed in 3 minutes = $\frac{120}{5} \times 3 = 24 \times 3 = 72$.
26. (C) A football costs ₹ 93 > ₹ 20. So, it cannot be bought if you have only ₹ 20.

27. (B) Amount saved by Sruthi every day
 $= ₹ 1.50$
 \therefore Amount saved by her in 10 days
 $= ₹ 1.50 \times 10 = ₹ 15$
28. (A) $49 = 7 \times 7$; $36 = 6 \times 6$; $25 = 5 \times 5$. So the next number in the pattern must be $4 \times 4 = 16$.
 \therefore The missing number is 6.
29. (C) 4 spoons cost ₹ 6.40 \Rightarrow Cost of 1 spoon = $₹ \frac{6.40}{4} = ₹ 1.60$
 3 forks cost ₹ 5.40 \Rightarrow Cost of 1 fork
 $= ₹ \frac{5.40}{3} = ₹ 1.80$
 Difference in costs = ₹ 1.80 - ₹ 1.60 = ₹ 0.20
 \therefore A fork costs ₹ 0.20 more than a spoon.
30. (C) The number line represents $12 - 6 = 6$.
31. (D) The figure in option (D) has 2 squares and 1 rectangle as shown.



- So, the figure formed by Vijay is as that given in option (D).
32. (B) Cost of each mobile phone = ₹ 1400
 \therefore Cost of 9 phones = ₹ $1400 \times 9 = ₹ 12600$
 Cost of 4 laptops = Cost of 9 phones = ₹ 12600
 Cost of each laptop = ₹ $12600 \div 4 = ₹ 3150$
 \therefore Cost of 5 laptops = ₹ $3150 \times 5 = ₹ 15750$
33. (A) Present correct time = 5: 20
 Time 1 hour 40 minutes ago = $5: 20 - 1: 40 = 4: 80 - 1: 40 = 3: 40$
 The clock in option (A) shows 3: 40.
34. (B) From the pictograph, Sunday has the maximum number of symbols. So, the maximum number of ice-creams were sold on Sunday.
35. (B) Quantity of water needed to fill the beaker upto 4 litre mark = $(4 - 1.5) \text{ l} = 2.5 \text{ l} = 2500 \text{ ml}$
 Capacity of the mug = 20 ml
 \therefore No. of mugs of water needed
 $= \frac{2500}{20} = 125$

36. (A) The shape in option (A) can be divided into two equal parts by a dotted line as shown.



37. (D) Cost of 2 apples = ₹ 18
 \Rightarrow Cost of 1 apple = ₹ $18 \div 2 = ₹ 9$
 \therefore Cost of 5 apples = $9 \times 5 = ₹ 45$
38. (B) 8 m 37 cm is the shortest of the given lengths.
39. (D) The prime numbers in the given table are 2, 17 and 29 which are 3 in number.

$$\therefore \text{The required fraction} = \frac{3}{12} = \frac{1}{4}$$

40. (D) A circle has no corners.

General Science

41. (B) Plants do not have sense organs. But they do feel changes around themselves. The sunflower moves in the same direction as the sun.
42. (C) Papaya seeds shown as R in the given figure on germination grow into a new plant.
43. (A) In the life cycle of a plant, flower develops into a fruit. A fruit has seeds and seeds germinate to form a young plant.
44. (B) In the given figure arrow P is water, Q is food, R is oxygen, S is Carbon dioxide.
45. (C) Clouds are non-living things.
46. (C) A leaf helps in the exchange of gases, and a root anchors the plant to the soil, the trunk or stem supports the plant.
47. (D) Cows are also called cattle. Cattle are kept in a shed.
48. (A) A flower is the reproductive part of a plant that develops into a fruit.
49. (D) Snake has no chewing teeth, so it swallows its food as a whole.
50. (C) Animal (P) is a deer and it is a herbivore. Herbivores eat only plants and lion is a flesh eating animal.
51. (C) We can keep our surrounding clean by throwing waste in dustbins.
52. (A) A carrot is the root part of the plant. Potato, ginger and onion are the underground stem parts of the plant.
53. (D) When our hand touches a hot body, it sends a message to our nervous system. The nervous system immediately orders us to remove our hand.

54. (C) Regular physical exercises are essential for a healthy body, to keep ourselves fit and to develop strong bones and muscles. Basket ball is a physical exercise game. It helps us to build strong bones and muscles.
55. (A) Clay soil is very sticky, water cannot go through this soil easily. It has no spaces between the particles. It therefore holds a lot of water and hence it is used in making pots by a potter.
56. (B) A storm is a strong wind. It moves with great speed. A storm can break off branches of trees, damage buildings and electric poles.
57. (A) The given foot is found in scratching birds such as hens. They have sharp and hard claws that help them dig the soil.
58. (B) X - Mercury, Y- Venus and Z - Earth
59. (C) The digestion of food starts in the mouth and ends in the small intestine.
60. (C) Water vapour is lighter than the surrounding air, hence it rises up.
61. (C) Soil is of different kinds - clay, sandy and loam soil.
62. (C) Ducks have broad and flat beaks. The beak has tiny holes called shovels at the sides. These help the duck to dig the mud near the ponds and to pick up worms, insects and water plants for their food. The beaks also have strainers.
63. (D) Ice cube is the solid state of water.
64. (A) The weight of a substance is measured in grams and kilograms.
65. (C) Sunlight keeps our homes dry and free from germs.
66. (A) Lungs are the respiratory organs.
67. (B) The traffic symbol in option (B) represents zebra crossing.
68. (C) Heart and lungs are protected by the rib cage.
69. (D) The cuckoo does not make its own nest. It lays its eggs in the nest of the crow.
70. (B) The middle portion of the tongue labelled as part 'Q' detects the sour taste.
71. (C) Neck connects the head with the trunk and helps in the movement of the head.
72. (C) Burning of waste gives out smoke. Smoke may contain some harmful gases that cause air pollution.
73. (D) Water proof cloth is used to make an umbrella. A torn umbrella can be repaired by using a piece of old rain coat.
74. (C) The length of a classroom can be measured correctly by using a measuring tape.
75. (C) Waste water from our kitchen provides nutrients to the plants. It can be used for watering plants.