ADARSH SR. SEC. SCHOOL CHARKHI DADRI — Work is Worship

ADARSH
Group of Schools Ch. Dadri

APS — Builds Strong Minds...

Maths & Science Olympiad–2026

NAME- _____FATHER'S NAME- _____

ROLL NO.- _____CLASS- 7th

MOBILE NO.- _____INVIGILATOR SIGN. - _____

TIME- 90 Min. **MM- 70**

SUBJECT- MATHEMATICS & REASONING

Q1. A man sells 320 mangoes at the cost price of 400 mangoes. His gain percentage is

a) 10% b) 25%

c) 15% d) 20%

Q2. Diksha bought 27 packets of sweets each containing 65 sweets. She then repacked all of them into small bags of 15 sweets each. How many small bags did she use?

a) 117 b) 120

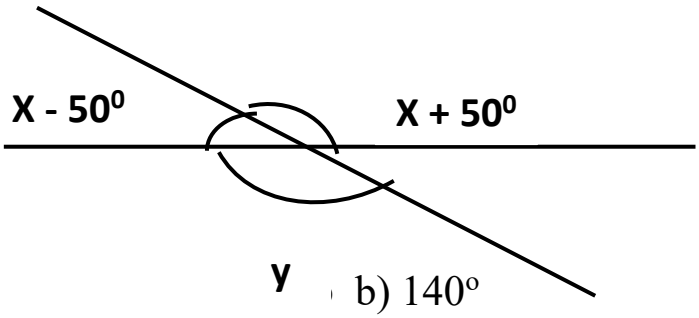
c) 105 d) 95

Q3. If the three angles of triangle are $(2x + 15)^o$, 85^o, $(x+20)^o$ then value of x is

a) 60^o b) 30^o

c) 10^o d) 20^o

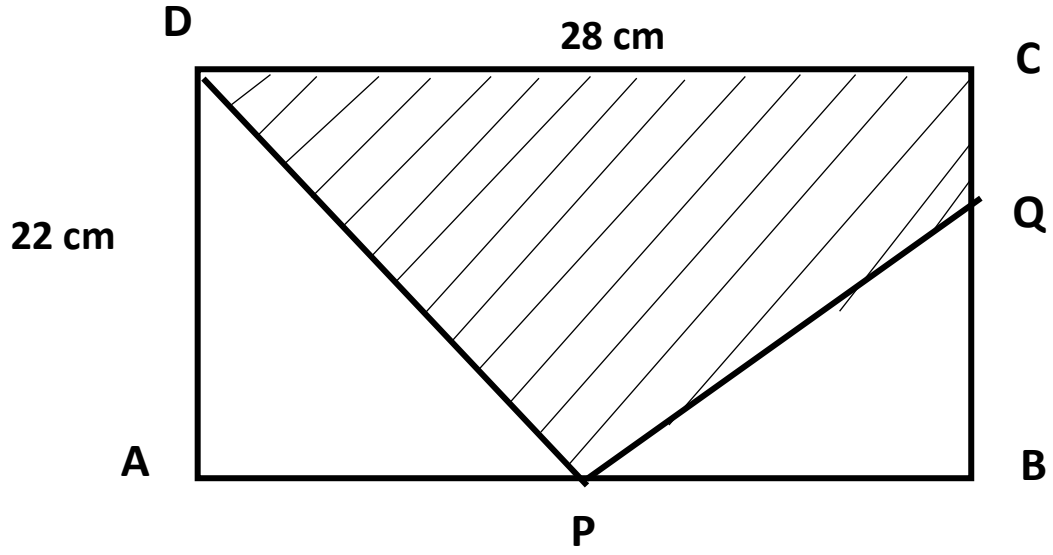
Q4. If l and m are intersecting lines in the given figure find the value of



a) 40^o b) 140^o

c) 110^o d) None of these

Q5. In the given figure ABCD is a rectangle. P and Q are midpoint of sides AB and BC respectively. The area of the shaded region is



a) 539 cm^2 b) 462 cm^2

c) 385 cm^2 d) 308 cm^2

Q6. Select the set of symbols which can be fitted correctly in the equation

18 ☐ 10 ☐ 25 ☐ 16 ☐ 2 = 167

a) -, ×, ÷, + b) +, ÷, ×, -

c) ×, -, +, ÷ d) +, ×, ÷, -

Q7. A match box measure 4cm × 2.5cm × 1.5cm what will be the volume of packet containing 12 such boxes.

a) 170 cm^3 b) 180 cm^3

c) 120 cm^3 d) 90 cm^3

Q8. If $5\left(\frac{x}{5}+\frac{2x}{4}\right)$ = 3x + 5 then value of x

a) 4 b) 6

c) 10 d) 12

Q9. Which of the following is the greatest number: - 2^{64}, 3^{48}, 5^{32}, 7^{16}

a) 2^{64} b) 3^{48}

c) 5^{32} d) 7^{16}

Q10. If 40% of a number is 256, then 25% of that number is-

a) 160 b) 200

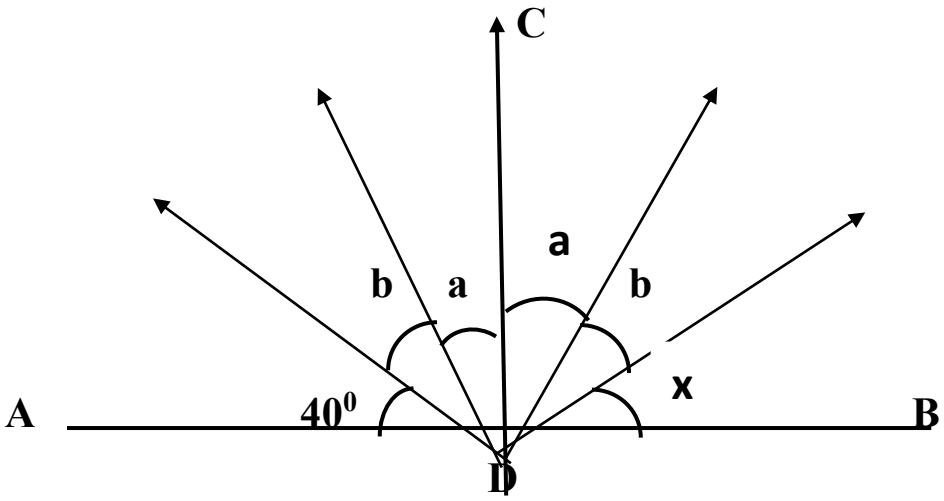
c) 125 d) 180

Q11. How much does $3p^2 – 17pq + 8pqr$ exceed $3p^3 + 4p^2 – pq + 3pqr$

a) $-3p^3 + p^2 – 5pqr + 16pq$ b) $-3p^3 - p^2 + 5pqr - 16pq$

c) $3p^3 + p^2 + 5pqr - 16pq$ d) $-3p^3 - p^2 – 5pqr + 16pq$

Q12. In the given figure CD ⊥ AB, then find the value of x



a) 20^o b) 50^o

c) 30^o d) 40^o

Q13. If the 70% of a number is added to 45, the result is the number itself. What is the number?

a) 115 b) 150

c) 350 d) 135

Q14. Simplify the following expression:

$$99 \times \left(\frac{1}{7}\right) + 99 \times \left(\frac{2}{7}\right) + 99x\left(\frac{3}{7}\right) + 99 \times \left(\frac{4}{7}\right) + 99 \times \left(\frac{5}{7}\right) + 99 \times \left(\frac{6}{7}\right)$$

a) 297 b) 467

c) 279 d) None of these

Q15. Simplify: $14 – [3 + 15\{15 \times 3 – 2(13 – 25)\}]$

a) 1024 b) -1024

c) 1038 d) -1038

Q16. Find the interest on ₹ 14500 at 18% per annum for a period of 3 years and 4 months

a) ₹ 8700 b) ₹ 9300

c) ₹ 9100 d) ₹ 8400

Q17. If $2^a = 4^b = 16^c = 256$ then what is the value of 2a + 3b + 4c?

a) 14 b) 25

c) 36 d) 42

Q18. In a certain store the profit is 320% of the cost. If the cost increase by 25% but the selling price remain constant, then what percentage of the selling price is the profit?

a) 30% b) 70%

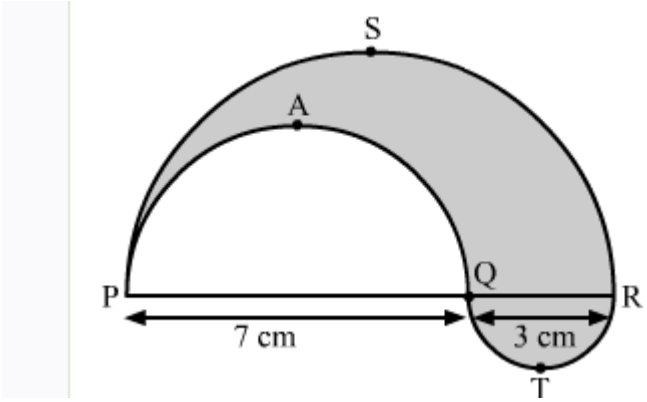
c) 100% d) 250%

Q19 Find the area of a rectangle whose length is 8m and diagonal 10m.

a) 24 m^2 b) 48 m^2

c) 56 m^2 d) 36m^2

Q20. Find the perimeter of shaded region



a) 9 π cm b) 10.8 π cm

c) 10 π cm d) 22.3cm

Q21. The ratio of copper and zinc in an alloy is 5:3. If the weight of copper in the alloy is 30.5 gm. Find the weight of zinc in it.

a) 18.2 gm b) 18.1 gm

c) 18.3 gm d) 18 gm

Q22. Solve: $\sqrt{8 + \sqrt{773 + \sqrt{116 + \sqrt{2 + \sqrt{520}}} + \sqrt{81}}}$

a) 2 b) 3

c) 7 d) 6

Q23. If P is 28% of Q and R is 56% of Q, then P is what percent of R?

a) 20%
b) 25%
c) 50%
d) 75%

Q24. How many zeros are at the end of the product of 1 × 3 × 5 × 7 ---------- 97 × 99?

a) 0
b) 5
c) 1
d) 9

Q25. Circumference of a circular disc is 132cm. Its area will be

a) 1380 cm^2
b) 1286 cm^2
c) 1188 cm^2
d) 1386 cm^2

Q26. 7 boys are standing in a row Aakash is 4^{th} from the right end. If he is shifted six places to the left, what is his position from the left end?

a) 20
b) 18
c) 11
d) 14

Q27. Complete the following matrix:

Z_2	**X_{19}**	**V_{66}**
A_3	**G_8**	**?**
T_4	**R_{17}**	**P_{68}**

a) E_6
b) F_{69}
c) E_{67}
d) E_{56}

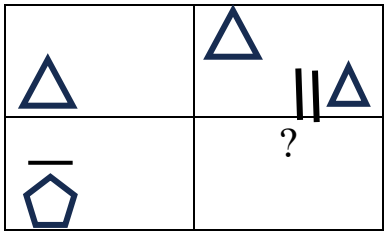
Q28. If CLOUD can be coded as 59432 and RAIN as 1678. How can AROUND be coded?

a) 614832
b) 614382
c) 641382
d) 461382

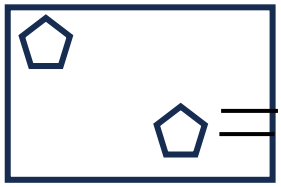
Q29. Pointing to photograph a person tells his friend, 'She is the granddaughter of the elder brother of my father'. How is the girl in the photograph related to the man?

a) Niece
b) Aunt
c) Sister
d) Sister-in-law

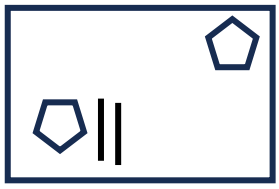
Q30. Find out which of the options completes the figure matrix



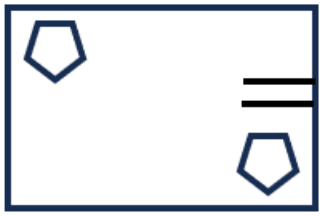
a)



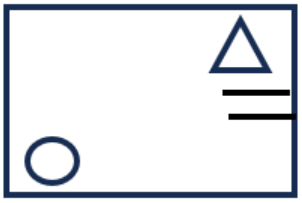
b)



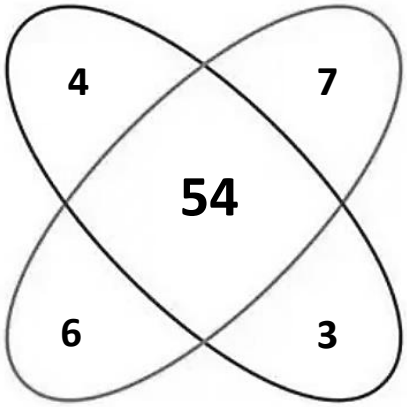
c)

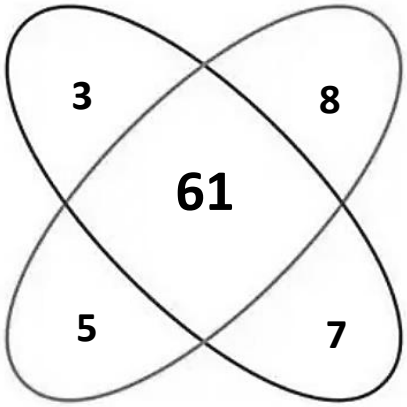


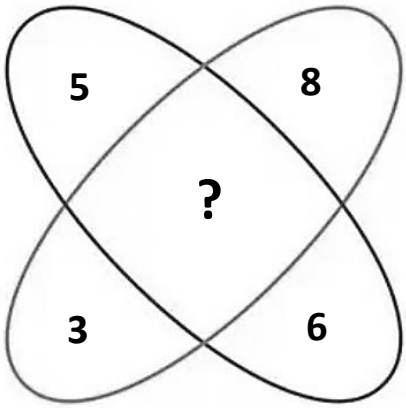
d)



Q31. Find the missing number if the same rule is followed in all the three figures.







a) 52

b) 54

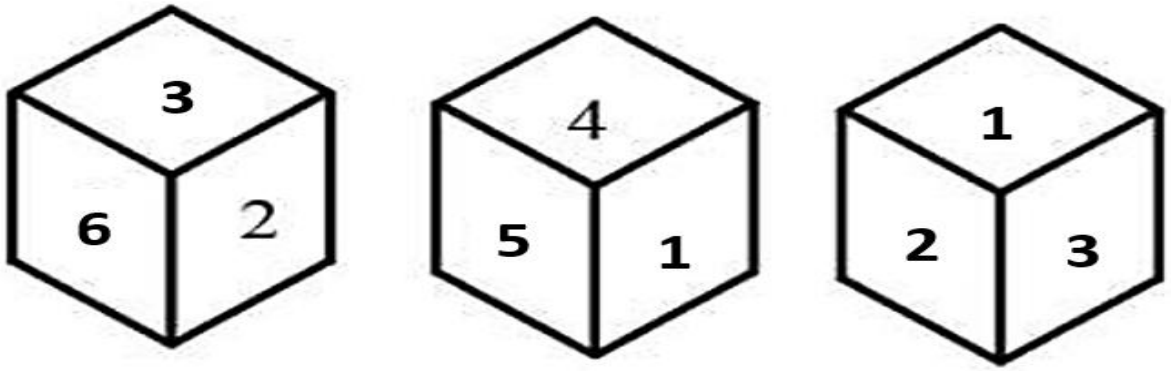
c) 64 d) 70

Q32. Tarun faces towards North. Turning to his right, he walks 25 meters. He then turns to his left and walks 30 meters next, he moves 25 meters to his right. Finally he turns to the right and moves 40 meters. In which direction is he now from his starting point?

a) South-West b) South

c) North-West d) South-East

Q33.



Three positions of a dice are given. Identify the number at the bottom when top's number is 6.

a) 5 b) 3

c) 4 d) 1

Q34. A is the son of C, C and Q are sisters, R is the mother's of Q. If A is father of P, then which of the following options is correct?

a) R is the maternal grandfather of A b) P is the maternal uncle of A

c) P and A are cousin d) All of the above

Q35. Complete the following analogy

BDA : 7 :: CAB : ?

a) 3 b) 6

c) 5 d) 9

SUBJECT- SCIENCE

Q36. A person covers a distance in 42 minutes. He Covers 2/3 of the distance at the speed of 4km per hour and rest on the speed of 5km per hour. What is the distance?

a) 2km b) 3 km

c) 1km d) 5km

Q37. Which of the following statements about the Jurassic period are correct?

1) Many large dinosaurs lived during this period.

2) Evidence of first birds have been found in fossils of this period.

3) It saw the emergence of many forms of primates.

4) This period related to what the Earth was 140 million years ago.

a) 2, 3 and 4 b) 1, 2 and 4

c) 1, 3 and 4 d) 1, 2 and 3

Q38. The increase in area of the solid on heating is called

a) Superficial expansion b) Linear expansion

c) Cubical expansion d) Quadra expansion

Q39. The temperature at which no more energy can be removed from matter is called

a) Absolute zero b) Boiling point

c) 32º F d) 32°C

Q40. The movement of oxygenated blood from the left auricle to left ventricle and then to aorta to all parts of the body is called

a) Extracellular circulation b) Pulmonary circulation

c) Systemic circulation d) Intracellular circulation

Q41. The process of crossing two varieties with different characters to obtain new variety is called

a) Introduction b) Selection

c) Hybridization d) Conservation

Q42. Robert was all alone at home and was studying. Someone came and rang the doorbell. Robert wanted to see who it was before opening the door so he saw through the peephole of the door. Which of the following is used for making the peepholes in the door?

a) Convex lens b) Convex mirror

c) Concave mirror d) Concave lens

Q43. Sam travelled by plane flying at an average speed of 600 km/h. The plane left the airport at 13:00 h and reached its destination at 15:45 h. How far did Sam travel?

a) 1350 km
b) 1200 km
c) 1650 km
d) 1800 km

Q44. Female mosquitoes suck blood from humans and other animals. They have a long, sharp pipe-like structure instead of teeth, that is used to pierce the skin and suck blood. Male mosquitoes, on the contrary, feed on plant sap and nectar. Identify the category to which they belong:

a) Female mosquito - Herbivorous Male mosquito - Omnivorous
b) Female mosquito - Herbivorous Male mosquito - Herbivorous
c) Female mosquito - Sanguivorous Male mosquito - Herbivorous
d) Female mosquito - Carnivorous Male mosquito - Carnivorous

Q45. Sarah observed the shadow of a tree at 8.00 a.m., 12.00 noon and 3.00 p.m. Which of the following statements is closest to her observation about the shape and size of the shadow?

a) The shape of the shadow of the tree changes but the size remains the same.
b) The size of the shadow of the tree changes but the shape remains the same.
c) Both the size and shape of the shadow of the tree change.
d) Neither the shape nor the size of the shadow changes.

Q46. A chemical change produces a new substance whereas a physical change does not produce a new substance. Which of the following pair of changes is/are irreversible chemical change(s)?

M: Stretching a rubber band
N: Burning of matchstick
O: Germination of seed
P: Dissolving sugar in water

a) N and O
b) O and P
c) M and N
d) M and P

Q47. There are many ways by which pathogens or germs of communicable diseases are transmitted from one person to another. What is common amongst the below-given diseases?

Cholera, Typhoid, Jaundice

a) These diseases are transmitted through air.

b) These diseases are transmitted through blood and saliva.

c) These diseases are transmitted through contaminated water.

d) These diseases are transmitted through insects/animals.

Q48. Read the two statements written below and select the correct option related to them:

Statement 1 - Scissors is a first-class lever where the fulcrum is between the load and the effort. It uses two first-class levers together.

Statement 2 - Stairs are an example of the inclined plane.

a) Both the statements are correct

b) Both the statements are incorrect

c) Statement 1 is correct but statement 2 is incorrect

d) Statement 1 is incorrect but statement 2 is correct

Q49. Which of the following is not true about fossil fuels?

a) We should use fossil fuels carefully as their quantity is limited.

b) When fossil fuel is burnt lot of energy is released which is used for various purposes.

c) Burning of fossil fuel causes air pollution.

d) Biogas is an example of a fossil fuel

Q50. Which of the following is an incorrect difference between boiling and evaporation?

a) Boiling takes place at a particular temperature while evaporation can take place at all temperatures.

b) Boiling is a fast process while evaporation is a slow process.

c) Boiling takes place only at the surface of a liquid whereas evaporation takes place throughout the bulk of a liquid.

d) During boiling, movement of bubbles with sound can be observed while during evaporation neither movement nor sound is observed

Q51. Convent 37 °C into degree Fahrenheit.

a) 98.7 °F
b) 98.9 °F
c) 89 °F
d) 98.6 °F

Q52. A boy kicks a football horizontally from the roof of a building of height 6 m. If the line joining the initial position of the football and the point where it hits the ground makes an angle of 45^0 with the ground, then calculate the displacement of the football:

a) 6 m
b) 6 √2 m
c) 12 m
d) 3 m

Q53. Lichens are best examples to be associated to

a) Autotrophic relationship
b) Symbiotic relationship.
c) Parasitic relationship
d) All of these

Q54. How can we separate the silk fiber from cocoon?

a) By keeping it under the Sun
b) By boiling it
c) By giving steam
d) Any one of these

Q55. CO_2 gas turn lime water milky due to

a) $Ca(OH)_2$ is formed
b) H_2 gas is released
c) $CaCO_3$ is formed.
d) Milk Protein is formed

Q56. Fog is formed on the bathroom mirror when one takes a hot shower but not during a cold shower, because:-

a) Formation of fog on the mirror does not depend on amount of vapour
b) Evaporation of water is more at higher temperature
c) Formation of fog on mirror is not concerned with temperature of water.
d) Both a) and b)

Q57. Shashi has wrapped a utensil with black paper, while Swati has wrapped a utensil with white paper. In which utensil will water get hot faster in the Sun?

a) Shashi's utensil
b) Swati's utensil
c) It depends on sunshine
d) It depends on water kept in it.

Q58. Which type of hair we get from sheep?

a) Black, white
b) Coarse, fine
c) Fine, black
d) Black, coarse

Q59. The burning of magnesium ribbon can be represented by an equation

a) Mg→ MgO
b) $2Mg + O_2 \rightarrow 2MgO$
c) Both (A) and (B)
d) Neither (A) nor (B)

Q60. Choose from the following representing correct flow of blood in our body?

a) Right atrium→ Right ventricle →lungs→ left atrium →left ventricle→ body

b) Right ventricle →Right atrium→ left atrium→ lungs→ left ventricle → body

c) Both (A) and (B)

d) None of these

Q61. If the bob of a pendulum is lifted on one side say 'P' and left, it swings to a point on opposite side say 'Q' and again come back to position 'P', this is called

a) Motion
b) Oscillation
c) Time period
d) None of these

Q62. The term used for apparent reversal of image is

a) Vertical inversion
b) Lateral inversion
c) Virtual
d) Erect

Q63. Name the organic and inorganic impurities present in sewage in the same order.

a) Metals, vegetable waste
b) Vegetable waste, urine
c) Plastic, animal waste
d) Urine, metal

Q64. Concave lens forms and image than the object.

a) Inverted, virtual, bigger
b) Erect, virtual, smaller
c) Erect, real, bigger
d) Inverted, real, smaller

Q65. Rusting of iron can be best represented by

a) $Fe \rightarrow Fe_2O_3$ b) $Fe + O_2 \rightarrow Fe_2O_3$

c) $O_2 \rightarrow Fe_2O_3$ d) $Fe + O_2 + H_2O \rightarrow Fe_2O_3$

Q66. In a forest ecosystem, fungi and bacteria suddenly disappear. Which immediate long-term impact is most likely to occur?

a) Increase in herbivore population

b) Accumulation of dead organic matter

c) Faster photosynthesis

d) Decrease in oxygen level

Q67. A student accidentally adds excess base to an acidic solution during an experiment. Which would be the most appropriate way to restore neutrality?

a) Add more acid slowly b) Heat the solution

c) Add distilled water only d) Remove some solution

Q68. Rachel went to the supermarket to buy cooking utensils. Help her to choose the correct utensil:

a) Frying pan with aluminium handle.

b) Stainless steel frying pan with wooden bottoms.

c) Stainless steel frying pans with plastic bottom.

d) Frying pan with plastic handle

Q69. Marking on a bulb is 60 W, 220 V. What does it signify?

a) The bulb is connected across the 220 volts and 60 joules of energy is consumed for every second.

b) The bulb is connected across 60 joules and 220 volts of energy is consumed.

c) 60 unit of current will flow in the bulb.

d) 220 unit of current will flow in the bulb.

Q70. In a household circuit, which is the safest and most effective position to place a fuse or a switch to protect a specific appliance?

a) On the neutral wire. b) On the earth wire.

c) On the live wire. d) Between the appliance and the neutral wire