GLOBAL MATH OLYMPIAD

Past Papers Archive

Compiled from GMO past editions — Seed through Scholar Level

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MIND CARVER

GLOBAL MATH OLYMPIAD — PAST PAPERS ARCHIVE

Voyager Level

Grades 5–6

Past Paper — For Reference & Practice

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1 Basic problems (1 Each - 15 Marks)

1. What is 3×125?

   (a) 325
   (c) 625
   (b) 250
   (d) 375

2. What is the value of $12 + 6 \times 2 - 4$?

   (a) 16
   (c) 24
   (b) 20
   (d) 18

3. What is the sum of 4,567 and 3,892?

   (a) 8,459
   (c) 8,559
   (b) 8,369
   (d) 8,469

4. What is $\frac{3}{5}$ as decimal?

   (a) 0.3
   (c) 0.6
   (b) 0.5
   (d) 0.8

5. If a recipe calls for 1/2 cup of flour and you want to double the recipe, how much flour do you need?

   (a) 1/4 cups
   (c) 2 cups
   (b) 1 cups
   (d) 4 cups

6. What is 1.5 as a fraction?

   (a) 1/2
   (c) 5/2
   (b) 3/2
   (d) 7/2

7. If you rotate a square 90 degrees clockwise, how will it look?

   (a) It will look the same
   (c) It will look like diamond
   (b) it will look like rectangle
   (d) It will look upside down

8. A triangle has angles of 40 degree and 50 degree. What is the third angle?

   (a) 80
   (c) 100
   (b) 90
   (d) 70

9. What is the area of a triangle with a base of 8 cm and height of 6 cm?

   (a) 14 cm^2
   (c) 48 cm^2
   (b) 24 cm^2
   (d) 90 cm^2

10. A number is multiplied by 5 and then 10 is added. The result is 40. What is the number?

    (a) 4
    (c) 6
    (b) 5
    (d) 7

11. John is taller than Mary, and Mary is taller than Susan. Who is the shortest?

    (a) John
    (b) Mary
    (c) Susan
    (d) Cannot be determined

12. What is the next letter in pattern: A, C, E, G,

    (a) F
    (b) H
    (c) I
    (d) J

13. A line graph shows the temperature in a city over a week. If the line moves downward, what does it indicate?

    (a) The temperature is increasing
    (b) The temperature is decreasing
    (c) The temperature is stable
    (d) There is no trend

14. How many faces does a cube have?

    (a) 5
    (b) 8
    (c) 6
    (d) 9

15. How many lines of symmetry does a square have?

    (a) 2
    (b) 3
    (c) 6
    (d) 4

2 Moderate problems (3 Each - 45 Marks)

16. A box contains 144 chocolates arranged in equal rows. If there are 12 chocolates in each row, how many rows are there?

    (a) 13
    (b) 12
    (c) 14
    (d) 15

17. A school bus travels 35 km per day. How far does it travel in 12 days?

    (a) 320 km
    (b) 400 km
    (c) 420 km
    (d) 450 km

18. What is the value of $15 \div 3 + 4 \times 2 - 5$?

    (a) 8
    (b) 11
    (c) 13
    (d) 9

19. Solve: 2/3 + 5/6

    (a) 7/9
    (b) 2/7
    (c) 3/2
    (d) 2/3

20. If 1/3 of bottle is filled with juice. How much more is needed to make it full?

(a) 1/2
(b) 2/3
(c) 3/3
(d) 9/3

21. Convert 3.75 into a fraction

(a) 7/2
(b) 15/4
(c) 3/4
(d) 15/8

22. Which shape is used to create a tessellation (repeating pattern without gaps)?

(a) square
(b) circle
(c) star
(d) heart

23. A shape is made from two identical rectangles, each with a length of 6 cm and a width of 3 cm. If the rectangles are joined along their longer sides, what is the perimeter of the new shape?

(a) 18
(b) 24
(c) 30
(d) 36

24. What is the measure of an angle that is supplementary to a 75-degree angle?

(a) 15
(b) 105
(c) 90
(d) 180

25. A farmer has 3 cows, 2 chickens, and 4 goats. How many legs do all the animals have in total?

(a) 24
(b) 28
(c) 30
(d) 32

26. A bus starts with 12 passengers. At the first stop, 5 get off and 8 get on. At the second stop, 4 get off and 6 get on. How many passengers are on the bus now?

(a) 15
(b) 17
(c) 19
(d) 21

27. If you fold a piece of paper in half three times, how many sections will it have?

(a) 3
(b) 4
(c) 6
(d) 8

28. A line graph shows the growth of a plant over several weeks. If the line is flat for the first two weeks, then goes up steeply, then is flat again, it means?

(a) The plant grew steadily the whole time.
(b) The plant didn't grow for two weeks, then grew a lot, then stopped growing.
(c) The plant grew a lot, then stopped growing.
(d) The plant grew a little bit each week.

29. A frog is at the bottom of a 10-meter well. Each day, it climbs 3 meters but slides back 2 meters. How many days will it take to escape?

(a) 5
(b) 7
(c) 8
(d) 10

30. If today is Tuesday, what day will it be 17 days from now?

(a) Friday
(b) Saturday
(c) Sunday
(d) Monday

3 Advanced problems (4 Marks - 40 Marks)

31. What is the result of $12,345 \times 678$?

(a) 8,372,910
(b) 8,369,910
(c) 8,382,910
(d) 8,392,910

32. A shopkeeper bought 250 kg of rice. He sold 120 kg at \$3 per kg and the rest at \$2 per kg. How much money did he earn in total?

(a) \$510
(b) \$550
(c) \$620
(d) \$700

33. A box contains 120 chocolates. 1/4 are dark chocolate, 1/3 are white chocolate, and the rest are milk chocolate. How many are milk chocolates?

(a) 40
(b) 50
(c) 55
(d) 60

34. What is the value of $\frac{5}{6}(\frac{3}{4} + \frac{1}{2})$?

(a) $\frac{25}{24}$
(b) $\frac{5}{8}$
(c) $\frac{15}{24}$
(d) $\frac{10}{12}$

35. Two identical squares are placed side by side to form a rectangle. If the perimeter of the rectangle is 24 cm, what is the area of one of the squares?

(a) 9 cm^2
(b) 12 cm^2
(c) 16 cm^2
(d) 18 cm^2

36. A rectangle is twice as long as it is wide. If its area is 50 cm^2, what is its width?

(a) 5 cm
(b) 3 cm
(c) 4 cm
(d) 6 cm

37. A magic square has the same sum in each row, column, and diagonal. Fill in the missing number:

8		6
	5	
4		

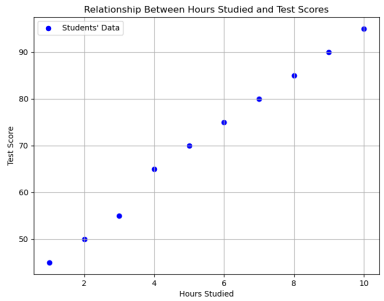
38. What is the missing number in the pattern: 3, 9, 27, 81, ?

(a) 162
(c) 324
(b) 243
(d) 486

39. A line graph shows the rainfall over 5 days. If the rainfall on Day 1 is 10 mm, Day 2 is 15 mm, and Day 3 is 20 mm, what is the average rainfall over these 3 days?

(a) 10 mm
(c) 20 mm
(b) 15 mm
(d) 25 mm

40. What does the below graph indicate?



(a) More study hours lead to lower scores
(c) The scores remain the same
(b) There is no relationship
(d) More study hours lead to higher scores