

BUDHA DAL PUBLIC SCHOOL PATIALA
FINAL EXAMINATION (3 March 2026)
MATHEMATICS
Class - VIII
(Set - A)

Time Allowed: 3 hours

Maximum Marks: 80

Instructions:

1. All questions are compulsory.
2. Section - A : Q.No. 1 to 10 carry 1 mark each
3. Section - B : Q.No. 11 to 20 carry 2 marks each
4. Section - C : Q.No. 21 to 30 carry 3 marks each
5. Section - D : Q.No. 31 to 35 carry 4 marks each

SECTION-A

1. If a number ends in 3 then its cube ends in (1)
a) 0 b) 7 c) 9 d) 8
2. $(a^2 - b^2)$ is equal to (1)
a) $(a - b) + (a + b)$ b) $(a - b)(a - b)$ c) $(a + b)(a + b)$ d) $(a + b)(a - b)$
3. The coordinate (0, 4) lies on (1)
a) x-axis b) y-axis c) origin d) no where
4. The formula of total surface area of a cube with edge 'a' (1)
b) $4a^2$ b) $3a^2$ c) $6a^2$ d) $5a^2$
5. The probability of an event lies between (1)
b) 0, 1 b) 1, 1 c) 0, 0 d) 2, 1
6. Common factor of $12x, 54$ is (1)
a) 12 b) x c) 6 d) 54
7. Do population and area form a direct proportion? (1)
a) Yes b) No
8. The value of $(3^0)^{-5}$ is (1)
a) $\frac{1}{3^5}$ b) $\frac{1}{3^{-5}}$ c) 0 d) 1
9. What is the value of $(2y - 9) + (2y - 9)$ (1)
a) $4y - 18$ b) $4y + 18$ c) $4y$ d) $2y - 18$
10. Central angle = $\frac{\text{item}}{100} \times \underline{\hspace{2cm}}$ (1)
a) 180° b) 90° c) 360° d) 100°

A-1

SECTION-B

11. Is 432 a perfect cube? Justify the answer. (2)
12. A box containing 5 red slips, 3 yellow slips and 2 pink slips. A slip is drawn from the box without looking into the box. What is the probability of getting (2)
- a) a pink slip b) a brown slip (2)
13. Divide $48xyz(3x-18)(5y-20)$ by $96(y-4)(x-6)$ (2)
14. Find the value of m for which $5^{-m} \div 5^{-3} = 5^{-5}$

15. If 'x' varies directly as 'y' then find the value of x_1 and y_3

x	x_1	4.9	7
y	3	7	y_3

16. Find the height of cuboid if its base area is 40cm^2 and volume is 120cm^3 . (2)
17. Factorise by middle term splitting $3m^2 + 9m + 6$ (2)
18. Find the side of a cube whose total surface area is 150cm^2 . Find the volume of cube also. (2)
19. a) Write abscissa and ordinate of $(-5, 6)$ (2)
- b) On a Cartesian plane where will be the location of $(4, 0)$? (2)
20. Write the type of variation for the following:
- a) Number of people in a party and quantity of food to be prepared.
- b) A particular distance with uniform speed and the time taken.

SECTION-C

21. Find the smallest number by which 3087 can be multiplied to make it a perfect cube. (3)
22. Factorise (3)
- a) $81x^4 - 16y^4$
- b) $9x^2 - 6xy$

23. Draw a graph for the given data :

Side of square (cm)	2	3	5	7	10
Area (Sq. cm)	4	9	25	49	100

Is the graph linear?

A-2

24. a) Express 4285000000 in standard form

(3)

b) Simplify $\frac{5^{-4} \times 6^{-2} \times 25 \times t^{-4}}{5^{-7} \times 9 \times t^{-8}}$

25. A garden roller is 20cm in diameter and 70cm in length. What area will be covered in 100 revolutions. ($\pi = \frac{22}{7}$). Find the area in square meters.

(3)

26. There are 720 people participated in function in which various dance activities the have to perform as per their choice, which are given below:

Activities	Gidha	Bangra	Lavani	Kathak	Bihu
No. of People	240	180	80	120	100

Represent the above data by a pie chart.

27. Kamal can type 1020 words in 18 mins. How many word will be type in $1\frac{1}{2}$ hours?

(3)

28. Factorise

(3)

a) $x^3(a - 2b) + x^2(a - 2b)$

b) $lm + m + l + 1$

29. Simplify the expression

(3)

$3(5x - 4) - 2(7x + 3) + 4(8x - 2)$

30. 1200 men can finish a stock of food in 35 days. How many more men should join them so that the same tock may last for 25 days?

(3)

SECTION-D

31. 17 cards numbered 1, 2, 317 are put in a box and mixed thoroughly. One person draws a card from the box. Find the probability that the number on the card is

(4)

a) an odd

b) a composite number

c) divisible by 3

d) multiple of 2

32. Factorise

(4)

a) $121b^2 - 88bc + 16c^2$ b) $a^2 - b^2 - 2b - 1$

33. a) Add
 $4y(3y^2 + 5y - 7)$ and $2(y^2 - 4y + 5)$
 b) Simplify
 $a(a^2 + a + 1) + 5$ for $a = -1$

Case Study – 1

34. Mahi's school organised an annual event. 'Threat Thrills' for the drama and theatre festival. A stage has to be constructed for the event. The stage has a cuboidal shape with dimensions of 500 cm. by 400 cm by 80cm.

Read the questions below and answer.

- Write the formula to find total surface area of a cuboid.
- The stage is to be painted. All the faces except the bottom face are to be painted.
 What is the total area is to be painted?
 a) 544000 cm² b) 344000 cm² c) 504000 cm² d) 304000 cm²
- Write formula to find volume of a cuboid.
- The cube shaped stools are placed in the auditorium for the students. The volume of each stool is 216000 cm³. Find the edge of cube.
 a) 60 cm b) 30 cm c) 70 cm d) 40 cm

35. Meenu, a life skills trainer, goes to various cities by car. She often find herself struggling with the travelling time. To manage her schedule efficiently, she tracks the distance travelled by her car in 5 hours. Refer to the given graph and help Meenu by answering the given questions.

Read the questions below and answer.

- What is the speed of the car in which Meenu is driving?
 a) 30 m/hr b) 20 km/hr c) 30 km/hr d) 1km/ hr
- How many kilometres would Meenu drive in 8 hours, if the same trend follows?
- How much distance will be travelled by Meenu in 2.5 hours?
 a) 60 km b) 55 km c) 40 km d) 50 km
- If Meenu increases her speed by 10 km/hr, how much less time will she take to cover 60 km?

