

BUDHA DAL PUBLIC SCHOOL PATIALA
FINAL EXAMINATION (1 March 2025)
MATHEMATICS
Class - VII (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. The median of the given data 6, 9, 11, 10, 8, 9, 7, 12, 8 is 1
a) 9 b) 8 c) 10 d) 12
2. The sum of four times a number and 15 is 47. The Number is _____. 1
a) 6 b) 8 c) 7 d) 9
3. The number of transversals that can be drawn for two given line is _____. 1
a) 2 b) infinite c) 4 d) 1
4. The lengths of two sides of a triangle are 15 cm and 18 cm. Between what two measures should the length of third side fall? 1
a) 15cm, 33cm b) 3cm, 18cm c) 3cm, 33cm d) none of these
5. 25 chairs cost Rs. 6250, The cost of 40 chairs is _____ 1
a) Rs. 10,800 b) Rs. 10,000 c) Rs. 10,500 d) Rs. 12,000
6. The sum obtained on adding zero to the rational number $\frac{8}{9}$ is 1
a) 0 b) $\frac{8}{9}$ c) 1 d) $\frac{9}{8}$
7. The value of the expression $1^3 + 2^2 + 4^0 + 5^1 =$ _____
a) 10 b) 12 c) 11 d) 13
8. The price of an article reduce from Rs. 400 to Rs. 390. The percentage decrease in price is
a) 2.5% b) 5% c) 10% d) 15%
9. If in a right angled triangle acute angles are equal, the measure of each of them is
a) 30° b) 45° c) 60° d) 90°
10. The complement of the angle measuring 35° is _____.
a) 25° b) 65° c) 55° d) 45°

SECTION-B

11. Find the mode of the following data : 11, 2, 4, 3, 2, 0, 1, 2, 2, 4
Find the mean also.
12. Fill in the blanks $\frac{7}{13} = \frac{35}{\square} = \frac{-63}{\square}$

13. Express the following rational numbers in lowest form.

a) $\frac{36}{180}$ b) $\frac{14}{-49}$

14. a) Name the pair of interior angles on the same side of the transversal.
b) The angles forming pair of alternate angles when lines are parallel have _____ measures.

15. a) Write the equation for : One third of a number minus 2 is 15.
b) Write the statement for : $5b + 1 = 7$

16. Identify the greater number (i) 2^{50} or 50^2 (ii) 2^7 or 7^3

17. Find the exterior angle of triangle.



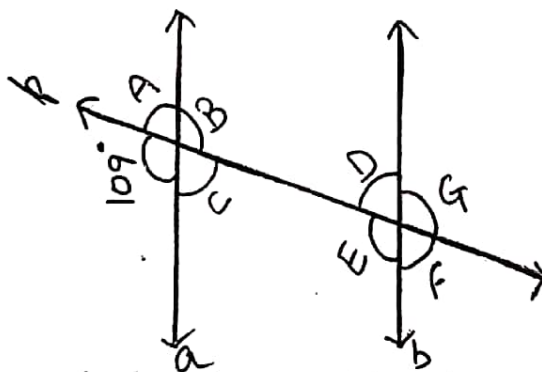
18. Give the steps and find the value of unknown $\frac{5x}{8} = 20$

19. Find the simple interest at the end of 3 years where principal is Rs. 5420 and rate of interest is 10% per annum.

20. a) Find the angle which is equal to its supplement.
b) Find 15% of 3600 seconds

SECTION-C

21. In the adjoining figure $a \parallel b$
Find the unknown angles if p is transversal.

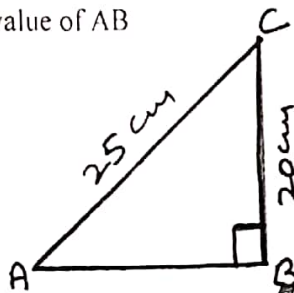


22. In a test Vibha gets twice the marks as that of Anjali. Two times Vibha's marks and three times Anjali's marks make 350. If Anjal gets x marks. Form an equation from above given information and also find marks of both Anjali and Vibha.

23. a) Express 248×147 in exponential form.
b) Find the value of $(3^0)^5$

24. From the given figure find the value of AB

3



25. Find the median of the data 19, 25, 59, 48, 35, 31, 30, 32, 51

3

If 25 is replaced by 52, what will be the new median?

26. a) Which of the two rational number $\frac{5}{7}$ and $\frac{3}{5}$ is greater.

3

b) Show $\frac{-7}{3}$ on N line.

c) Find $\frac{3}{8} - \frac{5}{12}$

27. a) Find unknown

3



- b) Is it possible to have a triangle with following sides 5cm, 5cm, 8cm.
also name the triangle.

28. Simplify by using rules $\frac{25 \times t^8 \times 10 \times 9}{t^3 \times 6 \times 5}$

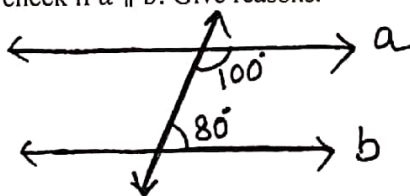
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29. a) Reeta saves Rs. 6000 per month from her salary and this is 30% of her salary. Find her salary.

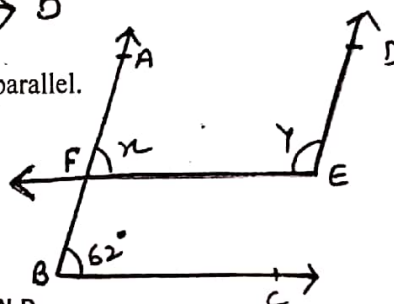
b) Which is greater 3:7 or 2:5 ?

30. a) In the given figure check if $a \parallel b$. Give reasons.

3



- b) In the given figure, the arms of the angles are parallel.
Find x and y if $\angle B = 62^\circ$



SECTION-D

31. a) Write standard form of 35290000
b) Express $8 \times 8 \times 8$ in exponential form taking base as 2.
c) Write expanded form of 902034
d) Write in usual form 3.96×10^8

32. a) Find the unknown $5(2 - 7n) = -10$
 b) Find the number which is twice a number increased by 2 is equal to thrice a number decreased by 1.
33. The following data shows the rainfall in five districts of a state for the years 2012 and 2013.

District	A	B	C	D	E
Rainfall in 2012 in cm	22	34	12	19	10
Rainfall in 2013 in cm	32	12	26	30	20

Represent the above data using a double bar graph.

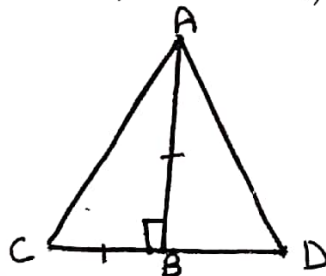
Case Study - 1

34. Me and my friend went to a shop to buy winter clothes, which was on sale. Discount of 25% was given on each item. I purchased a sweater for Rs. 2000 and my friend bought a Jacket for Rs. 3000 marked price.

On the basis of given information, answer the following questions by choosing the correct option from the given four options in each question:

- What is the discount in rupees on sweater?
 a) Rs. 500 b) Rs. 600 c) Rs. 400 d) Rs. 250
- What is the discount in rupees on Jacket?
 a) Rs. 600 b) Rs. 500 c) Rs. 750 d) Rs. 650
- How much money have I paid to shopkeeper after getting discount?
 a) Rs. 1500 b) Rs. 2500 c) Rs. 1800 d) Rs. 1000
- What is the total discount on both the items?
 a) Rs. 1100 b) Rs. 1150 c) Rs. 1250 d) Rs. 1200

35.



From the above figure answer the following questions:

- If B is mid point on Triangle ACD, What is AB?
 a) Altitude b) Median c) Median + Altitude d) None of these
- Name the triangle ABC
 a) right angled triangle
 b) right angled isosceles triangle
 c) isosceles triangle
 d) equilateral triangle
- In $\triangle ACB$ which is the longest side, what is its name?
 a) AC, Hypotenure b) AC, base c) AC, perpendicular d) None of these
- In $\triangle ACB$ is $AC^2 = 2(AB)^2$
 a) Yes b) No

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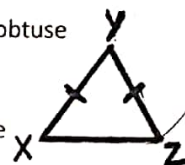
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5. Section - D : Q.No. 31 to 35 carry 4 marks each

SECTION-A

1. The mode of the data 4.6, 4.4, 4.6, 4.1, 4.2, 4.4, 4.6, 4.5 is 1
 a) 4 b) 4.6 c) 4.4 d) 4.5
2. The sum of three times a number and 11 is 41. Find the number. 1
 a) 10 b) 15 c) 20 d) 11
3. Two angles, $\angle 1$ and $\angle 2$ form a linear pair. If we increase the measure of $\angle 1$, then measure of $\angle 2$ will 1
 a) decrease b) increase c) remains unchanged d) become obtuse
4. If $\triangle XYZ$ is isosceles with $XY = YZ$ then 1
 a) $\angle X = \angle Z$ b) $\angle Y = \angle Z$ c) $\angle X = \angle Y$ d) none of these
5. A car can go 150 km on 10 litres of petrol. How far can it go on 30 litres of petrol? 1
 a) 450 km b) 350 km c) 250 km d) 150 km
6. Which of the following rational number is not in standard form? 1
 a) $\frac{-3}{-6}$ b) $\frac{3}{7}$ c) $\frac{-4}{9}$ d) $\frac{-1}{8}$
7. The value of the expression $1^0 + 2^3 + 4^2 =$ _____
 a) 5^0 b) 25 c) 5 d) 125
8. The percentage of votes cast decreased from 20,000 to 18,000. Find percentage decreased.
 a) 10% b) 20% c) 5% d) 4%
9. In a right angled triangle, the angles other than right angle are
 a) obtuse b) right c) acute d) straight
10. The supplement of angle measuring 120°
 a) 60° b) 40° c) 160° d) 120°

SECTION-B

11. Find mean and median of following data : 12, 16, 15, 13, 14, 15, 19, 11, 20
12. a) A _____ is defined as a number that can be expressed in the form p/q where p is an integer and q is a natural number



b) Fill in the blanks $\frac{-2}{7} = \frac{\square}{49}$

13. Reduce the given rational number to their standard form.

a) $\frac{-24}{15}$ b) $\frac{70}{-98}$

14. The angles of a triangle are in ratio 5:6:7. Find measures of the angles.

15. a) Write the equation for : 10 subtracted from a number gives. 7

b) Write the statement for : $2x + 12 = 64$

16. Give the steps and find the value of unknown $\frac{10m}{3} = 30$

17. a) Identify the greater number (i) 3^6 or 6^3 (ii) 12×10^6 or 2×10^7

18. Find the simple interest to be paid at end of 5 years where Principal is Rs. 27000 and Rate of interest is 12% p.a.

19. a) Find the angle which is equal to its complement

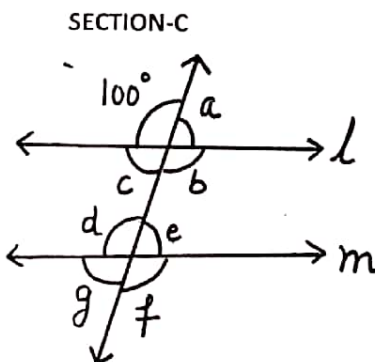
b) When a transversal cuts two lines such that pairs of corresponding angles are equal, lines have to be _____

20. a) Convert 0.45 to percent

b) Find 10% of 60 minutes

21. In the given figure $l \parallel m$.

Find values of a, b, c, d, e, f and g



22. In a test Anjali gets twice the marks as that of Radhika. Sum of three times Anjali's marks and four times Radhika's marks make 400. If Radhika gets x marks, Anjali gets how many marks. Form an equation from above given information and also find marks of both Radhika and Anjali.

23. a) Express the following in exponential form (i) $m \times m \times m \times n \times n \times y \times y \times y \times y$

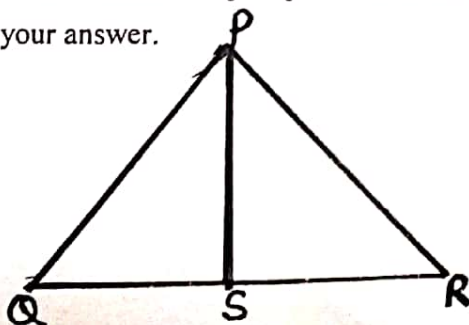
b) Find the value of 6^4

c) Using laws of exponents and write answer in exponential form

(i) $7^{17} \div 7^9$ (ii) $(11^4)^3 \div 11^5$

24. In a ΔPQR , PS is the median. Is $PQ + QR + PR > 2PS$?

Give reason for your answer.



25. State True/ False

3

- a) The mean is one of the numbers in a data.
- b) The mode is always one of the numbers in data.
- c) The median is always one of the numbers in a data.

26. a) The lengths of two sides of a triangle are 10 cm and 11 cm. Between what two measures should the length of third side fall? 3

b) Is it possible to have a triangle with following sides ? 4cm, 5cm, 7cm

27. Find

3

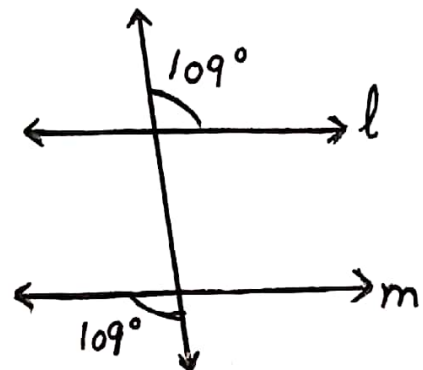
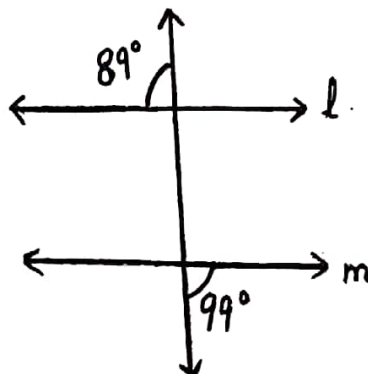
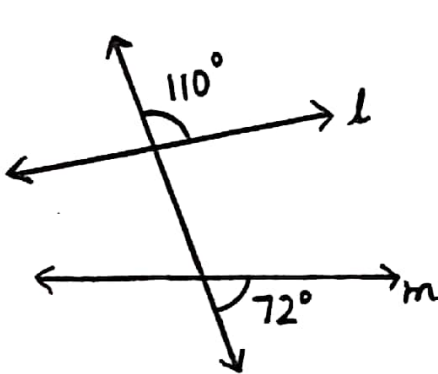
a) $\frac{-3}{7} - \left(\frac{-4}{9}\right)$ b) $\frac{5}{14} \div \left(\frac{-9}{42}\right)$ c) $\frac{5}{2} \times \left(\frac{-4}{3}\right)$

28. a) Express 2700 as product of power of its prime factors. 3

b) Standard form of 127900000

c) Expanded form of 5126012

29. Check whether the lines are parallel in each case, based on known angles. Give reason. 3



30. a) Shivani saves Rs. 6000 from her salary. If this is 20% of her salary, what is her salary? 3

b) Convert each part of ratio to percent 4 : 3 : 3

SECTION-D

31. The following table shows average intake of nutrients in calories by rural and urban groups in a particular year. Using a suitable scale for given data. Draw a double bar to compare the data.

Food stuff	Pulse	Fruits	Milk	Fats and oil	Sugar
Rural	35	75	95	19	25
Urban	49	66	85	35	55

31. a) Write exponential form for $8 \times 8 \times 8 \times 8$ taking base as 2 4
 b) Simplify $\frac{12^4 \times 9^3 \times 4}{6^3 \times 8^2 \times 27}$

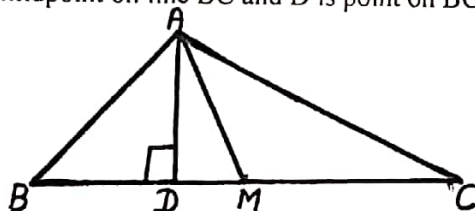
32. a) Virat scored thrice as many runs as Rishabh. Together their runs fell four runs short of double century. How many runs did each score? 4
 b) Karan's father's age is 5 year more than three times Karan's age, if his father is 35 years old.

Case Study - 1

34. Sonia and Monika went to a shop to buy winter clothes which was on sale. Discount of 30% was given on each item. Sonia purchased a Parka for Rs. 5000 as Marked Price and Monika purchased a long coat for Rs. 7000 as Marked price. 4

On the basis of given information, answer the following questions by choosing the correct option from the given four options in each question:

- 1) What is the discount in rupees on long coat?
 a) Rs. 2100 b) Rs. 2200 c) Rs. 3100 d) Rs. 1100
 - 2) What is the discount in rupees on Parka?
 a) Rs. 1500 b) Rs. 1600 c) Rs. 1100 d) Rs. 2100
 - 3) What is total discount on both items?
 a) Rs. 3600 b) Rs. 3700 c) Rs. 3500 d) Rs. 3100
 - 4) How much money has Monika paid to shopkeeper after getting discount?
 a) Rs. 4900 b) Rs. 4800 c) Rs. 4700 d) none of these
35. In $\triangle ABC$, M is midpoint on line BC and D is point on BC 4



On the basis of given information, answer the following questions by choosing the correct option from the given four options in each question:

- 1) What is the name of line AM ?
 a) Median b) Altitude c) None of these
- 2) Is $BM = MC$?
 a) Yes b) No
- 3) Name the triangle ADB
 a) Right angled triangle b) obtuse angled triangle
 c) Acute angled triangle d) None of these
- 4) In a right angled triangle, sum of squares of two sides is equal to
 a) $(\text{Hypotenuse})^2$ b) $(\text{Base})^2$ c) $(\text{Perpendicular})^2$ d) None of these