

DEVAMATHA CMI PUBLIC SCHOOL
HALF YEARLY EXAMINATION 2017-2018

Std. VIII**MATHEMATICS**

Time : 3 h.

Marks : 80

General Instructions :

1. All questions are compulsory.
2. The question paper consists of 35 questions divided into four sections A, B, C, D.
3. Question numbers 1 to 10 carry 1 mark each.
4. Question numbers 11 to 20 carry 2 marks each.
5. Question numbers 21 to 30 carry 3 marks each.
6. Question numbers 31 to 35 carry 4 marks each.

Section - AI Choose the correct answer from the options given below : (1x10=10)

1. Which of the following number is a perfect cube ?
 a) 243 b) 512 c) 392 d) 8640
2. A square board has an area of 121 square units. How long is each a side of the board ?
 a) 11 units b) 12 units c) 13 units d) 14 units d) 8640
3. In a throw of die, the probability of getting the number is :
 a) $\frac{1}{2}$ b) $\frac{1}{6}$ c) 1 d) 0
4. The length at a rectangle in a
5. The value of $(4 - 3 \ 2) (4 + 3 \ 2)$
6. If any triangle ABC , $A > B$, $B > C$. Then the smallest side is :

Section - B7. Write any two postulates from Euclid's Geometry. (6x2=12)8. Find the value of c if

$$2c \quad c = \quad \text{||} \quad \text{||}$$

9. Prove that through a given point we can draw only one perpendicular to a given line.

10. If ABCD is a parallelogram, then prove that $\angle ABC \cong \angle DCB$.11. Factorise $c^4 - 625$

12. Find the product of the following

i $(5 + 3) (2 + 2)$

ii $(2 + 3) (3 - 2)$

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Section - C

- 13. Show how 5 can be represented on a number line. Write steps of construction also.
- 14. The sides of a triangular plot are in the ratio of 3:5:7 and it's perimeter is 300m. Find it's area.
- 15. If $3 + 1 = a + b$, find the value of a and b.

$3 - 1$

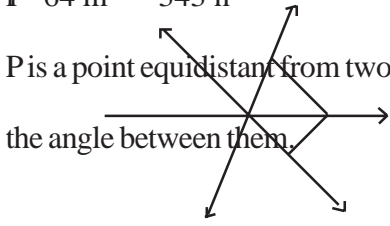
- 16. If two lines intersect each other, then prove that the vertically opposite are equal.

17. Factorise the following :

i $27 y^3 + 125 z^3$

ii $64 m^3 - 343 n^3$

- 18. P is a point equidistant from two lines l and m intersecting point A. Show that the line AP bisects the angle between them.



Sleep	- 8 hours
School	- 6 hours
Home work	- 4 hours
Play	- 4 hours
Others	- 2 hours

- 22. Solve the following:
 - i) $8m + 4 = 3(m-1) + 7$
 - ii) $x + 15 = \frac{4x}{3} + \frac{3}{7}$

- 23. The difference between two whole numbers is 66. The ratio of the two numbers is 2 : 5. What are the two numbers ?

24. Construct a rhombus PQRS whose diagonals $PR = 6$ cm and $QS = 7.5$ cm

25. What should be added to twice a rational number to get ?

26. In the following parallelogram, find the values of p and q.

27. Is 2352 a perfect square ? If not, find the smallest number that should be multiplied with 2352 to get a perfect square. Find the square root of the new number.

28. Find $x + y + z$ from the following figure.

29. Write any 3 properties of rectangle.

30. Find the square root of the following

- i) 12.25 ii) 7.29

		PART - D	
		135 - 140	
	Solve the following :	3	
	($4 \times 5 = 20$)	140 - 145	
31.	Draw a histogram for the following data.	7	
	Heights in cm.	Number of girls	150
	125 - 130	4	1
	130 - 135	150 - 155	2

Answer the following questions:

- i) Which group contains maximum girls ?
- ii) How many girls have a height of 145 cms and more ?

32. Construct a quadrilateral TRUE where $TR = 5.5 \text{ cm}$. $RU = 4 \text{ cm}$, $UE = 5 \text{ cm}$.

$\angle R = 75^\circ$ and $\angle U = 120^\circ$

33. Solve the following :

i)

ii)

34. A positive number is 5 times another number. If 21 is added to both the numbers, then one of the new numbers becomes twice the other new number. What are the numbers ?

35. Find the unknown angles for the following parallelograms.

i)

ii)