

First Mid-Term Examination - 2026

Class - 10

Time : 1.30 Hours

Mathematics

Marks: 50

I. Choose the correct answer. $7 \times 1 = 7$

1. If $n(A \times B) = 6$ and $A = \{1, 3\}$ then $n(B)$ is
a) 1. b) 2 c) 3. d) 6
2. If $\{(a, 6), (8, b)\}$ represents an identity function, then the values of a and b are respectively
a) $(8, 6)$. b) $(8, 8)$. c) $(6, 8)$. d) $(6, 6)$
3. If $f: A \rightarrow B$ is a bijective function and $n(B) = 7$, then $n(A)$ is
a) 7 b) 49. c) 1. d) 14
4. Let $n(A) = m$ and $n(B) = n$. The total number of relations that can be defined from A to B is
a) m^n b) n^m c) $2^{mn} - 1$ d) 2^{mn}
5. $7^{4k} \equiv \underline{\hspace{1cm}} \pmod{100}$
a) 1 b) 2. c) 3. d) 4
6. When 1729 is prime factorized, the sum of the exponents of the prime factors is
a) 1 b) 2 c) 3 d) 4
7. Given $F_1 = 1, F_2 = 3$ and $F_n = F_{n-1} + F_{n-2}$ then F_5 is
a) 3. b) 5 c) 8 d) 11

II. Answer any 5 questions: $5 \times 2 = 10$

8. If $B \times A = \{(-2, 3), (-2, 4), (0, 3), (0, 4), (3, 3), (3, 4)\}$ find the sets A and B .
9. If $f(x) = 3 + x$ and $g(x) = x - 4$ find $f \circ g$ and $g \circ f$.
10. f is a function from $\mathbb{R}$ to $\mathbb{R}$ defined by $f(x) = 3x - 5$. If $(a, 4)$ and $(1, b)$ are given, find the values of a and b .
11. The relation R is given by $\{(x, y) \mid y = x + 3, x \in \{0, 1, 2, 3, 4, 5\}\}$. Find its domain and range.
12. Solve: $5x \equiv 4 \pmod{6}$
13. The general term of a sequence is defined as follows.

$$a_n = \begin{cases} n(n+3); & n \in \mathbb{N} \text{ is an odd number} \\ n^2 + 1; & n \in \mathbb{N} \text{ is an even number} \end{cases}$$

Find the 11th term and the 18th term.

14. Find the number of terms in the arithmetic progression $3, 6, 9, 12, \dots, 111$.

III. Answer any 5 questions. **$5 \times 5 = 25$**

15. Let $A = \{x \in \mathbb{N} \mid 1 < x < 4\}$, $B = \{x \in \mathbb{W} \mid 0 \leq x < 2\}$ and $C = \{x \in \mathbb{N} \mid x < 3\}$.
Verify that $A \times (B \cap C) = (A \times B) \cap (A \times C)$.
16. Let $X = \{-5, 1, 3, 4\}$ and $Y = \{a, b, c\}$. Which of the following relations are functions from X to Y?
i) $R_1 = \{(-5, a), (1, a), (3, b)\}$
ii) $R_2 = \{(-5, b), (1, b), (3, a), (4, c)\}$
iii) $R_3 = \{(-5, a), (1, a), (3, b), (4, c), (1, b)\}$
17. Let $A = \{1, 2, 3, 4\}$ and $B = \{2, 5, 8, 11, 14\}$ be two sets.
Let $f: A \rightarrow B$ be a function given by $f(x) = 3x - 1$. Represent this function as
i) an arrow diagram ii) a table iii) a set of ordered pairs iv) a graph.
18. Using the given functions $f(x), g(x), h(x)$, show that $(f \circ g) \circ h = f \circ (g \circ h)$. $f(x) = x - 4$, $g(x) = x^2$ and $h(x) = 3x - 5$
19. Find the HCF of 396, 504, 636.
20. $p_1^{x_1} \times p_2^{x_2} \times p_3^{x_3} \times p_4^{x_4} = 113400$. Here p_1, p_2, p_3, p_4 are primes arranged in ascending order and x_1, x_2, x_3, x_4 are integers. Find the values of p_1, p_2, p_3, p_4 and x_1, x_2, x_3, x_4 .
21. The ratio of the 6th and 8th terms of an arithmetic progression is 7:9. Find the ratio of the 9th term to the 13th term.

IV. Answer any one question. **$1 \times 8 = 8$**

22. a) Construct a triangle similar to a given triangle PQR with its corresponding sides equal to $7/4$ of the corresponding sides of the triangle PQR. (Scale factor $7/4 > 1$) (OR)
b) Construct a triangle similar to a given triangle ABC with its corresponding sides equal to $4/5$ of the corresponding sides of the triangle ABC. (Scale factor $4/5 < 1$)

FIRST MID TERM TEST - 2026

Standard X

MATHEMATICS

Time : 1.30 hrs

Part - I

Marks : 50

7 x 1 = 7

I. Choose the correct answer:

- The range of the relation $R = \{(x, x^2) \mid x \text{ is a prime number less than } 13\}$ is :
 a) $\{2, 3, 5, 7\}$ b) $\{2, 3, 5, 7, 11\}$ c) $\{4, 9, 25, 49, 121\}$ d) $\{1, 4, 9, 25, 49, 121\}$
- Let $n(A) = m$ and $n(B) = n$, then the total number of functions that exist from B to A is
 a) m^n b) n^m c) $2^{mn} - 1$ d) 2^{mn}
- Euclid's division lemma states that for positive integers a and b, there exist unique positive integers q and r such that $a = bq + r$, where r must satisfy
 a) $1 < r < b$ b) $0 < r < b$ c) $0 \leq r < b$ d) $0 < r \leq b$
- If $f(x) = 2x^2$ and $g(x) = \frac{1}{3x}$, then fog is
 a) $\frac{3}{2x^2}$ b) $\frac{2}{3x^2}$ c) $\frac{2}{9x^2}$ d) $\frac{1}{6x^2}$
- The value of $(1^3 + 2^3 + 3^3 + \dots + 15^3) - (1 + 2 + 3 + \dots + 15)$ is
 a) 14400 b) 14200 c) 14280 d) 14520
- $7^{4k} \equiv \underline{\hspace{2cm}} \pmod{100}$.
 a) 1 b) 2 c) 3 d) 4
- The n^{th} term of an A.P is $2n-1$. The sum of the first 'n' terms of that A.P is
 a) n^2 b) $2n-1$ c) $n+2$ d) $n(n+2)$

Part - II

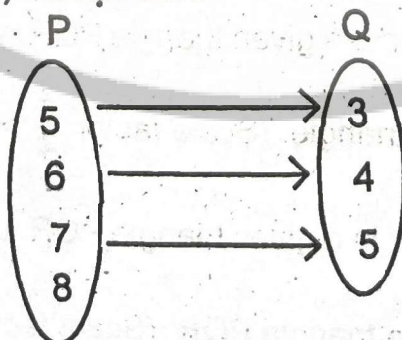
II. Answer any five questions. (Q.No. 14 is compulsory)

5 x 2 = 10

- Let $A = \{1, 2, 3\}$ and $B = \{x \mid x \text{ is a prime number less than } 10\}$, find $A \times B$.
- The arrow diagram shows the relationship between the sets P and Q. Write the relation in

(i) Set builder form

(ii) Roster form



- 'a' and 'b' are two positive integers, such that $a^b \times b^a = 800$. Find 'a' and 'b'.

11. Find k , $f \circ f(k) = 5$, where $f(k) = 2k - 1$
12. A man has 532 flower pots. He wants to arrange them in rows such that each row contains 21 flower pots. Find the number of completed rows and how many flower pots are left over.
13. Find the 19th term of an AP : $-11, -15, -19, \dots$
14. Find the 3rd and 4th term of a sequence, if $a_n = \begin{cases} n^2 & \text{if } n \text{ is odd} \\ \frac{n^2}{2} & \text{if } n \text{ is even} \end{cases}$

Part - III

III. Answer any five questions. (Q.No.21 is compulsory)

5 x 5 = 25

15. Let $A = \{x \in \mathbb{N} \mid 1 < x < 4\}$, $B = \{x \in \mathbb{W} \mid 0 \leq x < 2\}$ and $C = \{x \in \mathbb{N} \mid x < 3\}$, then verify that $A \times (B \cup C) = (A \times B) \cup (A \times C)$
16. Let $A = \{0, 1, 2, 3\}$ and $B = \{1, 3, 5, 7, 9\}$ are two sets. Let $f : A \rightarrow B$ be a function given $f(x) = 2x + 1$. Represent this function
- By arrow diagram
 - In a table form
 - As a set of ordered pairs
 - In a graphical form
17. $f(x) = 2x + 3$, $g(x) = 1 - 2x$ and $h(x) = 3x$, prove that $f \circ (g \circ h) = (f \circ g) \circ h$
18. Find the sum of $10^3 + 11^3 + 12^3 + \dots + 20^3$
19. Find the HCF of 396, 504, 636
20. The sum of three consecutive terms that are in A.P is 27 and their product is 288. Find the three terms.
21. The function 't' which maps temperature in degree Celsius (C) into temperature in Fahrenheit (F) is defined by $t(C) = F$ where $F = \frac{9}{5}C + 32$, find,
- $t(0)$
 - $t(28)$
 - $t(-10)$
 - The value of C when $t(C) = 212$
 - The temperature when the Celsius value is equal to the Fahrenheit value

Part - IV

IV. Answer the following.

1 x 8 = 8

22. a) Construct a triangle similar to a given triangle PQR with its sides equal to $\frac{7}{4}$ of the corresponding sides of a triangle. (Scale factor $\frac{7}{4} > 1$) (OR)
- b) Construct a triangle similar to a given triangle PQR with its sides equal to $\frac{3}{5}$ of the corresponding sides of the triangle PQR. (Scale factor $\frac{3}{5} < 1$)

FIRST MID TERM TEST - 2026

Standard X

MATHEMATICS

Time : 1.30 hrs

Part - I

Marks : 50

I. Choose the correct answer:

7 x 1 = 7

- The range of the relation $R = \{(x, x^2) \mid x \text{ is a prime number less than } 13\}$ is :
 a) $\{2, 3, 5, 7\}$ b) $\{2, 3, 5, 7, 11\}$ c) $\{4, 9, 25, 49, 121\}$ d) $\{1, 4, 9, 25, 49, 121\}$
- Let $n(A) = m$ and $n(B) = n$, then the total number of functions that exist from B to A is
 a) m^n b) n^m c) $2^{mn}-1$ d) 2^{mn}
- Euclid's division lemma states that for positive integers a and b , there exist unique positive integers q and r such that $a = bq + r$, where r must satisfy
 a) $1 < r < b$ b) $0 < r < b$ c) $0 \leq r < b$ d) $0 < r \leq b$
- If $f(x) = 2x^2$ and $g(x) = \frac{1}{3x}$, then fog is
 a) $\frac{3}{2x^2}$ b) $\frac{2}{3x^2}$ c) $\frac{2}{9x^2}$ d) $\frac{1}{6x^2}$
- The value of $(1^3 + 2^3 + 3^3 + \dots + 15^3) - (1 + 2 + 3 + \dots + 15)$ is
 a) 14400 b) 14200 c) 14280 d) 14520
- $7^{4k} = \underline{\hspace{2cm}} \pmod{100}$.
 a) 1 b) 2 c) 3 d) 4
- The n^{th} term of an A.P is $2n-1$. The sum of the first 'n' terms of that A.P is
 a) n^2 b) $2n-1$ c) $n+2$ d) $n(n+2)$

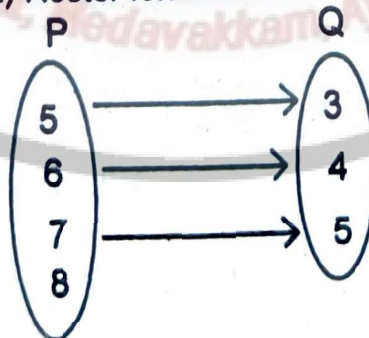
Part - II

II. Answer any five questions. (Q.No. 14 is compulsory)

5 x 2 = 10

- Let $A = \{1, 2, 3\}$ and $B = \{x \mid x \text{ is a prime number less than } 10\}$, find $A \times B$.
- The arrow diagram shows the relationship between the sets P and Q. Write the relation in

(i) Set builder form (ii) Roster form



- 'a' and 'b' are two positive integers, such that $a^b \times b^a = 800$. Find 'a' and 'b'.

X Maths

11. Find k , $f \circ f(k) = 5$, where $f(k) = 2k - 1$
12. A man has 532 flower pots. He wants to arrange them in rows such that each row contains 21 flower pots. Find the number of completed rows and how many flower pots are left over.
13. Find the 19th term of an AP : $-11, -15, -19, \dots$
14. Find the 3rd and 4th term of a sequence, if $a_n = \begin{cases} n^2 & \text{if } n \text{ is odd} \\ \frac{n^2}{2} & \text{if } n \text{ is even} \end{cases}$

Part - III

III. Answer any five questions. (Q.No.21 is compulsory)

5 x 5 = 25

15. Let $A = \{x \in \mathbb{N} \mid 1 < x < 4\}$, $B = \{x \in \mathbb{W} \mid 0 \leq x < 2\}$ and $C = \{x \in \mathbb{N} \mid x < 3\}$, then verify that $A \times (B \cup C) = (A \times B) \cup (A \times C)$
16. Let $A = \{0, 1, 2, 3\}$ and $B = \{1, 3, 5, 7, 9\}$ are two sets. Let $f : A \rightarrow B$ be a function given $f(x) = 2x + 1$. Represent this function
 - i) By arrow diagram
 - ii) In a table form
 - iii) As a set of ordered pairs
 - iv) In a graphical form
17. $f(x) = 2x + 3$, $g(x) = 1 - 2x$ and $h(x) = 3x$, prove that $f \circ (g \circ h) = (f \circ g) \circ h$
18. Find the sum of $10^3 + 11^3 + 12^3 + \dots + 20^3$
19. Find the HCF of 396, 504, 636
20. The sum of three consecutive terms that are in A.P is 27 and their product is 288. Find the three terms.
21. The function 't' which maps temperature in degree Celsius (C) into temperature in Fahrenheit (F) is defined by $t(C) = F$ where $F = \frac{9}{5}C + 32$, find,
 - i) $t(0)$
 - ii) $t(28)$
 - iii) $t(-10)$
 - iv) The value of C when $t(C) = 212$
 - v) The temperature when the Celsius value is equal to the Fahrenheit value

Part - IV

IV. Answer the following.

1 x 8 = 8

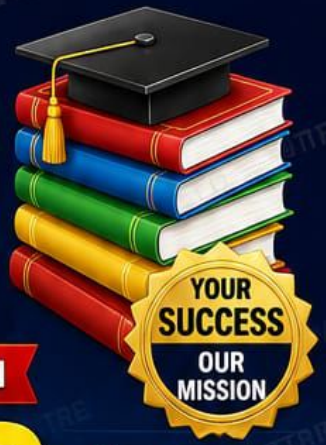
22. a) Construct a triangle similar to a given triangle PQR with its sides equal to $\frac{7}{4}$ of the corresponding sides of a triangle. (Scale factor $\frac{7}{4} > 1$) (OR)
- b) Construct a triangle similar to a given triangle PQR with its sides equal to $\frac{3}{5}$ of the corresponding sides of the triangle PQR. (Scale factor $\frac{3}{5} < 1$)



BLESSING TUITION & TUTORIAL CENTRE

No:12, Ganesh Apartment, Trust Square Street,
Medavakkam, Ayanavaram, Ch-12

ISO 9001 : 2015 CERTIFIED INSTITUTION

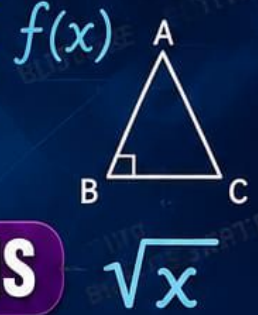


10TH STD MATHS

1ST MID TERM

VERY VERY IMPORTANT QUESTIONS

- 2026 & 2027 -



இயல் 1 – உறவுகளும் சார்புகளும்

எடுத்துக்காட்டு:

1.2, 1.5, 1.6, 1.17, 1.8, 1.11, 1.15,
1.18, 1.21, 1.23, 1.24, 1.14

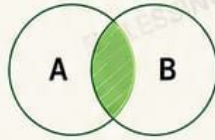
பயிற்சி 1.1: 1, 2, 5, 6, 7

பயிற்சி 1.2: 1, 2, 4, 5

பயிற்சி 1.3: 1, 2, 3, 4, 8, 5

பயிற்சி 1.4: 1, 2, 4, 6, 8, 9, 10, 12, 3

பயிற்சி 1.5: 1, 2, 3, 4, 6, 8



இயல் 2 – எண்களும் தொடர்வரிசைகளும்

எடுத்துக்காட்டு:

2.2, 2.3, 2.4, 2.5, 2.9, 2.10, 2.11, 2.12, 2.14,
2.22, 2.25, 2.26, 2.30, 2.33, 2.39, 2.43, 2.44,
2.45, 2.51, 2.53, 2.54

பயிற்சி 2.1: 2, 6, 7, 8

பயிற்சி 2.2: 2, 3, 5, 7

பயிற்சி 2.3: 1, 2, 3, 4, 6

பயிற்சி 2.4: 1, 6, 5

பயிற்சி 2.5: 2, 7, 11, 12, 14

பயிற்சி 2.6: 1, 7, 9, 10, 12

பயிற்சி 2.7: 2, 3, 6, 9

பயிற்சி 2.8: 2, 9

பயிற்சி 2.9: 1, 2, 5, 6, 7

2 3
5 6
8 9
0



இயல் 3 – இயற்கணிதம்

எடுத்துக்காட்டு:

3.1, 3.2, 3.9, 3.8, 3.10, 3.11, 3.5

பயிற்சி 3.1: 1, 4, 5

பயிற்சி 3.2: 1, 2

பயிற்சி 3.3: 1, 2, 3, 4

$$ax^2 + bx + c = 0$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

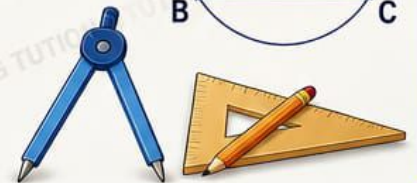
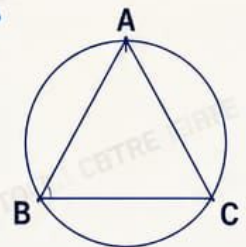


இயல் 4 – வடிவியல்

எடுத்துக்காட்டு:

4.1, 4.2, 4.3, 4.6, 4.11

பயிற்சி 4.1: 1, 3, 4



Contact

9486017820
8148814326



Email

blessingtuitionandtutorial
@gmail.com



Website

www.blessingtuition.com



Instagram

blessingtuitionandtutorial



Facebook

blessingtuitionandtutorial

YOUR SUCCESS
OUR MISSION



★ EDUCATION TODAY – SUCCESS TOMORROW ★



BLESSING

TUITION & TUTORIAL CENTRE

No:12, Ganesh Apartment, Trust Square Street,
Medavakkam, Ayanavaram, Ch-12

ISO 9001 : 2015 CERTIFIED INSTITUTION



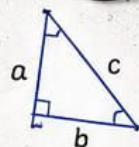
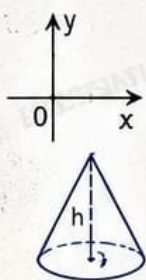
π

10TH STD MATHS

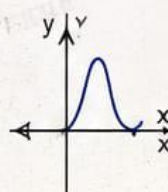
1ST MID TERM

VERY VERY IMPORTANT QUESTIONS

- 2026 & 2027 -



$$a^2 + b^2 = c^2$$



CHAPTER 1 – RELATIONS AND FUNCTIONS

EXAMPLE : 1.2, 1.5, 1.6, 1.8, 1.17, 1.11, 1.15,
1.18, 1.21, 1.23, 1.24, 1.14

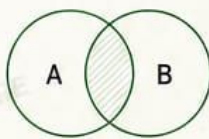
EXERCISE :1.1 : 1, 2, 5, 6, 7

EXERCISE :1.2 : 1, 2, 4, 5

EXERCISE :1.3 : 1, 2, 3, 4, 8, 5

EXERCISE :1.4 : 1, 2, 3, 4, 6, 8, 9, 10, 12

EXERCISE :1.5 : 1, 2, 3, 4, 6, 8



CHAPTER 2 – NUMBERS AND SEQUENCES

EXAMPLE : 2.2, 2.3, 2.4, 2.5, 2.9, 2.10, 2.11,
2.12, 2.14, 2.22, 2.25, 2.26, 2.30, 2.33,
2.39, 2.43, 2.44, 2.45, 2.51, 2.53, 2.54

EXERCISE :2.1 : 2, 6, 7, 8

EXERCISE :2.2 : 2, 3, 5, 7

EXERCISE :2.3 : 1, 2, 3, 4, 6

EXERCISE :2.4 : 1, 6, 5

EXERCISE :2.5 : 2, 7, 11, 12, 14

EXERCISE :2.6 : 1, 7, 9, 10, 12

EXERCISE :2.7 : 2, 3, 6, 9

EXERCISE :2.8 : 2, 9

EXERCISE :2.9 : 1, 2, 5, 6, 7



CHAPTER 3 – ALGEBRA

EXAMPLE : 3.1, 3.2, 3.6, 3.8, 3.9, 3.10, 3.14

EXERCISE : 3.1 : 1, 4, 5

EXERCISE : 3.2 : 1, 2

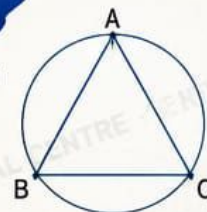
EXERCISE : 3.3 : 1, 2, 3, 4



CHAPTER 4 – GEOMETRY

EXAMPLE : 4.1, 4.2, 4.3, 4.6, 4.11

EXERCISE : 4.1 : 1, 3, 4



Contact

9486017820
8148814326



Email

blessingtuitionandtutorial
@gmail.com



Website

www.blessingtuition.com



Instagram

blessingtuitionandtutorial



Facebook

blessingtuitionandtutorial

**YOUR SUCCESS
OUR MISSION**



★ EDUCATION TODAY – SUCCESS TOMORROW ★