EASY WAY TO SCORE CENTUM IN 10th MATHEMATICS

by

Dr. K.THIRUMURUGAN

M.SC.,(M) M.SC.,(CS) M.Ed.,M.Phil (M) M.Phil (En) Ph.D.,

PGT IN MATHEMATICS

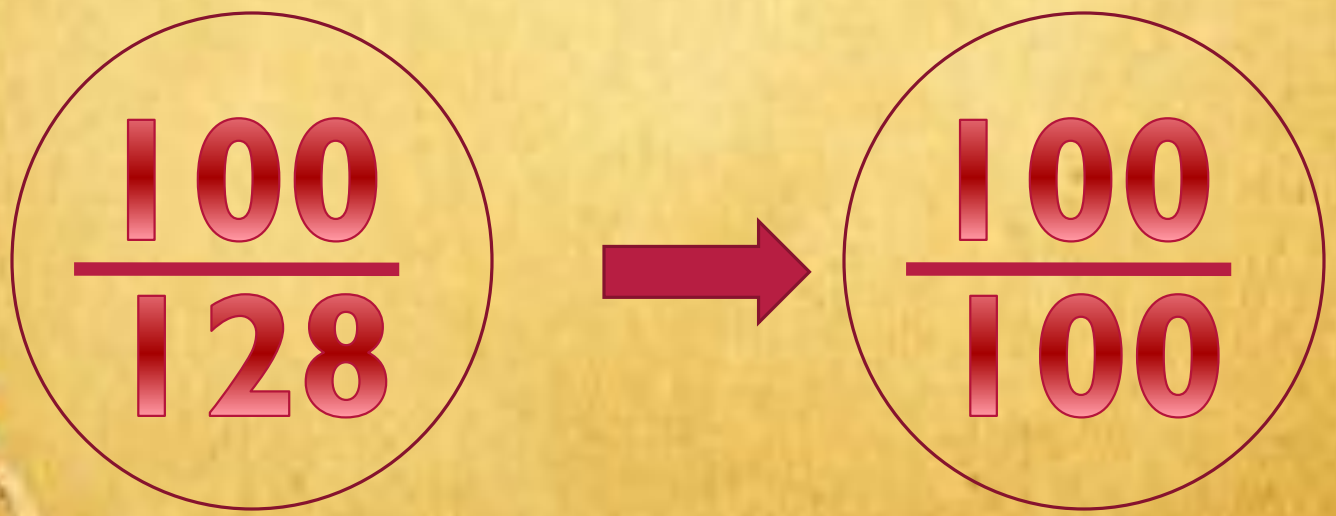
GHSS,VALUTHAVUR,VILLUPURAM DT

WWW.MATHSTIMES.COM

YOUTUBE:MATHSTIMES_THIRUMURUGAN

+91-97870 62570

Very very easy to get….



LEVEL OF QUESTION PAPER

No Blue Print

***Difficult=25%**

Average + Easy =75%

***Approximately 25% of questions are creative (Higher Order Thinking)**

BOOK BACK ONE MARK QUESTIONS (125)

14 / 125

S. no	CHAPTERS	TOTAL NO OF QNS	Exercise No
1.	RELATIONS AND FUNCTIONS	15	1.6
2.	NUMBERS AND SEQUENCES	15	2.10
3.	ALGEBRA	20	3.19
4.	GEOMETRY	15	4.5
5.	COORDINATE-GEOMETRY	15	5.5
6.	TRIGONOMETRY	15	6.5
7.	MENSURATION	15	7.5
8.	STATISCTICS AND PROBABILITY	15	8.5
	TOTAL	125	

Should we know?
*NO BLUE PRINT

* 3 or 4 -ONE MARK QUESTIONS ARE CREATIVE

*Not- ALL THE ONE MARK QUESTIONS ARE FROM OUR TEXT BOOK

Dr.K.THIRUMURUGAN

How to prepare MCQ?

Book back question , thinking corner, progress check, note, illustration + QR codes

*understanding the concept

* self practice

*Self test

*Self evaluation

*Should write option code and the corresponding answer

1) If $n(A \times B) = 6$ and $A = \{1,3\}$ then $n(B)$ is

(1) 1 (2) 2 (3) 3 (4) 6

$n(A \times B) = 6$ மற்றும் $A = \{1,3\}$ எனில் $n(B)$ ஆனது

ANSWER: $n(A \times B) = n(A)\, n(B)$

$6 = 2\, n(B)$

$n(B) = 3$, (3)3

4) $f = \{(2,a),(3,b),(4,b),(5,c)\}$ is a _____

(1) identity function (2) one-one function

(3) many-one function (4) constant function

(HOT- LEVEL)

ANSWER: TWO OR MORE ELEMENTS OF A HAVE SAME IMAGE IN B

(3)MANY-ONE FUNCTION

2) Given $F_1 = 1,\ F_2 = 3$ and $F_n = F_{n-1} + F_{n-2}$ then F_5 is

(1) 3 (2) 5 (3) 8 (4) 11

ANSWER: 1,3,4,7,11,---

FIBONACCI SERIES(1,1,2,3,5,---) (4)11

3) In an A.P, the first term is 1 and the common difference is 4. How many terms of the A.P must be taken for their sum to be equal to 120?

(1) 6 (2) 7 (3) 8 (4) 9

ANSWER: $a = 1, d = 4, s_n = 120$

1+5+9+13+17+21+25+29=120, $n = 8$

(3)8

5) The number of points of intersection of quadratic polynomial x^2+4x+4 with the x axis is

(1) 0 (2) 1 (3) 0 (or) 1 (4) 2

ANSWER :$y = x^2 + 4x + 4 = (x+2)^2$,

x-axis

y=0, x+2=0 ,x=-2 (2)1

7) If A is a 2′ 3 matrix and B is a 3′ 4 matrix, how many columns does AB have?

(1) 3 (2) 4 (3) 2 (4) 5

Order of A=2X3 ,

Order of B=3x4

Order of AB=2x4 ,

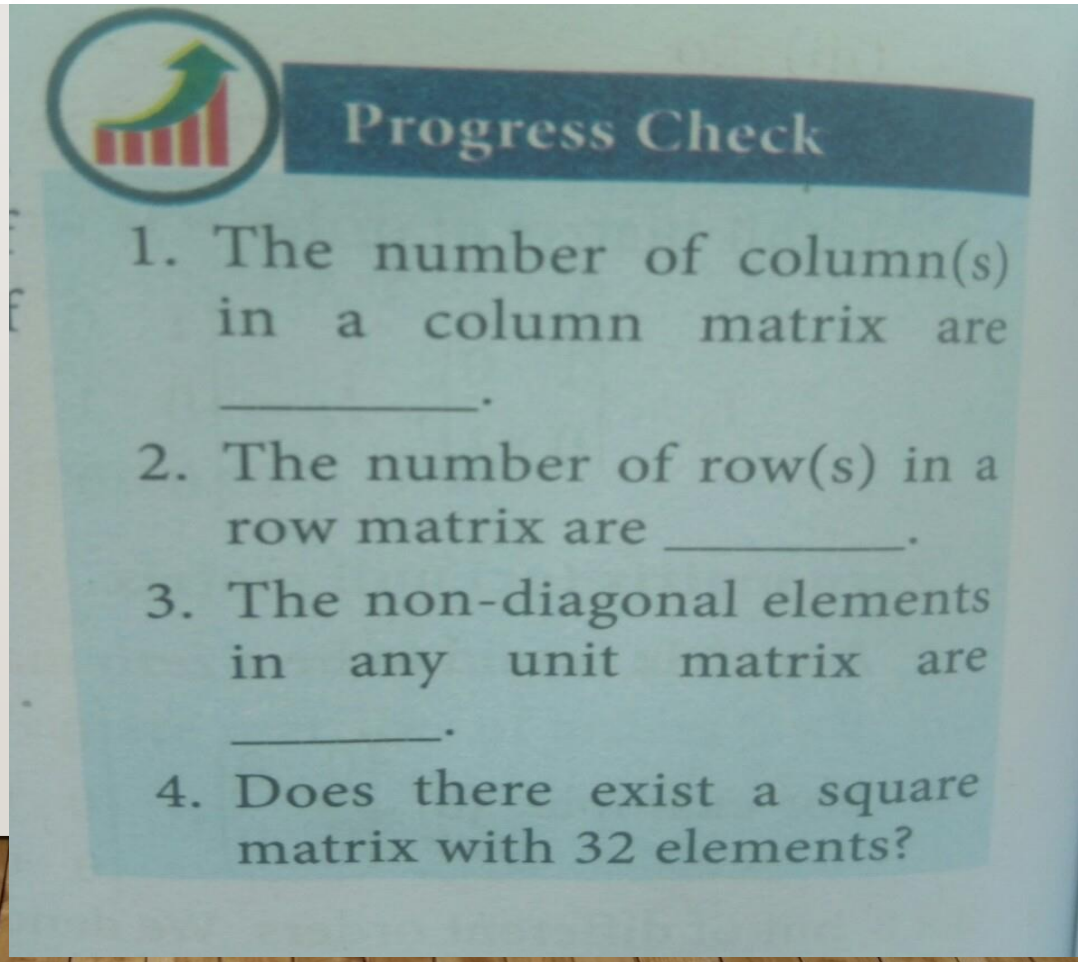
No of column of AB=4 (2)4

6) The non- diagonal elements in any unit matrix are _____

(1) 0 (2) 1 (3) m (4) n

(HOT-LEVEL)

Answer: (1)0



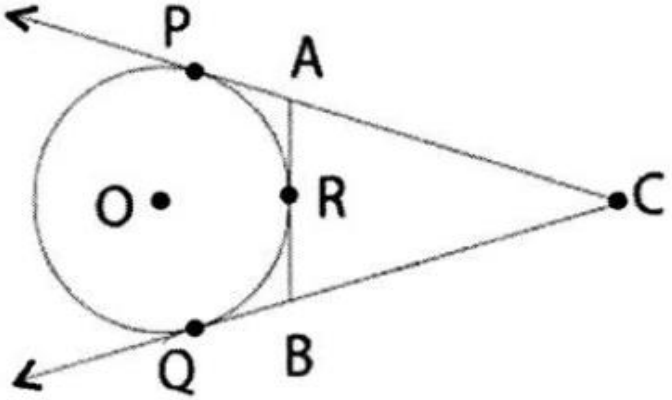
Progress Check

1. The number of column(s) in a column matrix are _____.
2. The number of row(s) in a row matrix are _____.
3. The non-diagonal elements in any unit matrix are _____.
4. Does there exist a square matrix with 32 elements?

8) In figure CP and CQ are tangents to a circle with centre at O. ARB is another tangent touching the circle at R. If $CP = 11\ cm$ and $BC = 7\ cm$ then the length of BR is

(1) 6 cm (2) 5 cm

(3) (c) 8 cm (4) 4 cm



படத்தில் O வை மையமாக உடைய வட்டத்தின் தொடுகோடுகள் CP மற்றும் CQ ஆகும். ARB ஆனது வட்டத்தின் மீதுள்ள புள்ளி R வழியாக செல்லும் மற்றொரு தொடுகோடு ஆகும்.

CP = 11செ.மீ மற்றும் BC = 7செ.மீ எனில் BR –ன் நீளம்,

(1) 6 செ.மீ (2) 5 செ.மீ (3) 8 செ.மீ (4) 4 செ.மீ

Answer: CP,CQ are two tangents, CP=CQ ,11=CQ

11=QB+7 ,QB=4 ,QB=BR (4)4 cm

9) The slope of the line joining (12,3), (4,a) is $\frac{1}{8}$. The value of 'a' is _____

(1) 1 (2) 4 (3) −5 (4) 2

Answer:

$$\frac{a-3}{4-12}=\frac{1}{8}$$

$$\frac{a-3}{-8}=\frac{1}{8}$$

$$a-3=-1$$

a=2 (4)2

12) The height of a right circular cone whose radius is 5 *cm* and slant height is 13 *cm* will be

(1) 12 *cm* (2) 10 *cm* (3) 13 *cm* (4) 5 *cm*

Answer: In a cone, $r = 5$, $l = 13$

$$\mathrm{h} = \sqrt{l^2 - r^2} = \sqrt{169 - 25} = \sqrt{144}$$

h=12 cm (1)12cm

10) If $x = a\tan\theta$ and $y = b\sec\theta$ then

(1) $\frac{y^2}{b^2} - \frac{x^2}{a^2} = 1$ (2) $\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$ (3) $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ (4) $\frac{x^2}{a^2} - \frac{y^2}{b^2} = 0$

$x = a\tan\theta$ மற்றும் $y = b\sec\theta$ எனில்

(1) $\frac{y^2}{b^2} - \frac{x^2}{a^2} = 1$ (2) $\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$ (3) $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ (4) $\frac{x^2}{a^2} - \frac{y^2}{b^2} = 0$

Answer: By inspection method we'll find solution

(1)

11) A letter is chosen at random from the letter of the word "PROBABILITY". Find the probability that it is not a vowel.

(1) $\frac{1}{5}$ (2) $\frac{2}{3}$ (3) $\frac{1}{3}$ (4) $\frac{3}{5}$

HOT-LEVEL

$$P(E) = \frac{n(A)}{n(S)}$$

?

13) If the mean and co-efficient of variation of a data are 4 and 87.5% then the standard deviation is

(1) 3.5 (2) 3 (3) 4.5 (4) 2.5

Answer: $\bar{x} = 4$ and $\text{CV} = 87.5$

$$CV = \frac{\sigma}{\bar{x}} \times 100$$

$$87.5 = \frac{\sigma}{4} \times 100, \quad \sigma = \frac{87.5 \times 4}{100} = \frac{350}{100} = 3.5$$

(1)3.5

14) Variance of first 20 natural numbers is

(1) 32.25 (2) 44.25 (3) 33.25 (4) 30

Answer:

Variance=$\frac{n^2-1}{12}=\frac{400-1}{12}=\frac{399}{12}$=33.25

(3)33.25

➢QUESTION PATTERN/CLASS-X MATHEMATICS

Note : This question paper contains **four** parts.

PART -I / பகுதி –I

(மதிப்பெண்கள் : 14) / (Marks :14)

Note : (1) Answer all the 14 questions 1X14=14

(ii) Choose the most suitable answer from the given four alternatives and write the option code with the corresponding answer

PART -II / பகுதி– II

(Marks :20) / (மதிப்பெண்கள் : 20)

II. Answer 10 questions. Question No. 28 is compulsory. 10 X 2=20

PART -III / பகுதி– III

(Marks :50) / (மதிப்பெண்கள் : 50)

III. Answer 10 questions 10 X 5=50

Question No. 42 is compulsory.

PART -IV / பகுதி– IV

(Marks :16)/ (மதிப்பெண்கள் : 16)

IV . Answer both questions. 2x8=16

➢PREPARATION OF GRAPH (Q.no 44)

Parabola (EX 3.15)

EXERCISE 3.15- 1,2,3,4,5,6,7, 8

3.48,3.49,3.50.3.51,3.52

*We should thorough all the problems

* Knowing key points to make your confident

- **Scheme of evaluation: EX3.15**

1.First table(points represented)
2.Solving the equation
3.Scale, x and y axix
4.Points Represented(table 2)
5.Drawing the graph(plotting the points)
6. Solution set
Try to draw the graph:

44) (a) Draw the graph of $y = x^2 + 3x - 4$ and hence use it to solve $x^2 + 3x - 4 = 0$.

Dr.K.THIRUMURUGAN

PREPARATION OF PRACTICAL GEOMETRY (Q.NO-43)

EXERCISES- 4.1, 4.2 & 4.4

Exercise:4.4-(12,13,14,15,16,17)
+Examples-4.30,4.31

Exercise:4.2-(12,13,14,15,16,17)
+Examples-4.17,4.18,4.19

Exercise:4.1-(10,11,12,13)
+Examples-4.10,4.11

Steps for -TWO TANGENTS (EX4.4)

Exercise:4.4-(12,13,14,15,16,17)
Examples-4.30,4.31

1.Drawing Rough diagram

2.First circle

3.Line segment

4.Perpenticlar bisector

5.Second circle

6.Two tangent lines

7.Measuring length

Steps for Triangle (Ex 4.2)

Exercise:4.2-(12,13,14,15,16,17)
Examples-4.17,4.18,4.19

1.Rough Diagram ,2.Line segment

3.Perpenticlar bisector ,4.Circle

5.Triangle **6.Altitude**

Try to draw:

(b) Draw a triangle ABC of base $BC = 8$ *cm*, $\angle A = 60°$ and the bisector of $\angle A$ meets BC at D such that $BD = 6$ *cm*.

Key for –Similar Triangles (EX4.1)

(Exercise:4.1-(10,11,12,13)
Examples-4.10,4.11)

1. Construct triangle
2. Draw a ray
3. Locate points
4. Draw lines

PART-IV(Q43,Q44)
Mark:16
(IV)Answer both questions

43)(a)Practical geometry

(or)

43)(b)Practical geometry/Geometry/other chapters-8m questions

44)(a)Graph

(or)

44)(b)Graph/Algebra/other chapters-8m questions

RELATIONS AND FUNCTIONS (5-MARK QUESTIONS)

EXERCISE	EXAMPLE
EX 1.4-2,9,10,11,12	1.19,1.15,1.16
EX 1.5-8,9,10	1.24,1.25
EX 1.3-4,6,7,10	1.11,1.8
EX 1.2-4	1.3,
EX 1.1-6,7	

RELATIONS AND FUNCTIONS(2-MARK)

(HOT-level)

1.Define: Functions,

2.Write the use of horizontal line test,

3.Write the use of vertical line test,

4.Find domain (Easy-level)

EX1.1-1,2,3+Eg-1.1,1.2,

EX1.2-1,2,3,4+Eg-1.4,1.5,

EX1.3-1,2,3,5,8+Eg-1.7,1.9,

EX1.4-3,4,5,6+Eg-1.17,1.18 ,1.13,1.14

EX1.5-1,2,3,4,6+Eg-1.22,1.23

2. NUMBERS AND SEQUENCES (5-MARK QUESTIONS)

EXERCISES	
EX.2.1	- 6,8
EX.2.2	-8,9,5,6,3
EX.2.3	- 8,9,10
EX.2.5	-11,12,13,14
EX.2.6	-5,**6,7**,9,10,**11,12**
EX.2.7	-6,7,9,10,11,12
EX.2.8	-6,7,9,10,
EX.2.9	-1(v),(vi),(vii),5,6,7

EXAMPLES

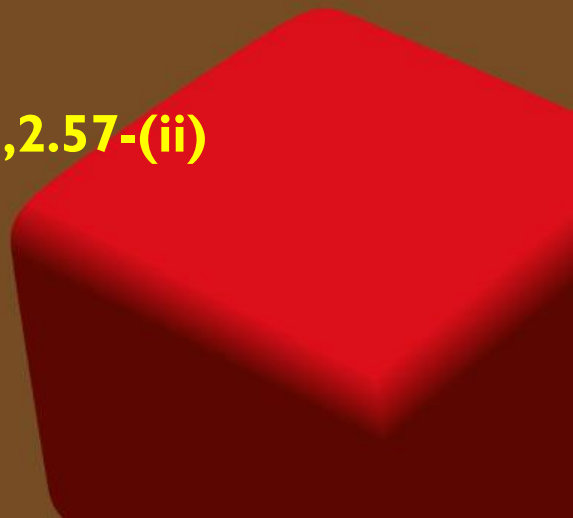
2.6,**2.28,2.29,**2.30,2.32,

2.36,2.38,**2.39,**

2.43,**2.44,**2.45,

2.51,2.50,

2.56 -(ii),(iii),2.57-(ii)



Dr.K.THIRUMURUGAN

2. NUMBERS AND SEQUENCES
(2-MARK QUESTIONS)

1.Modulo operations(Examples:2.15,2.16,2.14)

EX 2.3-1 to 5

2.EX2.9-1-(i),(ii),(iii),(iv),(vii),2,3 + Eg-2.55,2.56-(i),2.57-(i),2.58

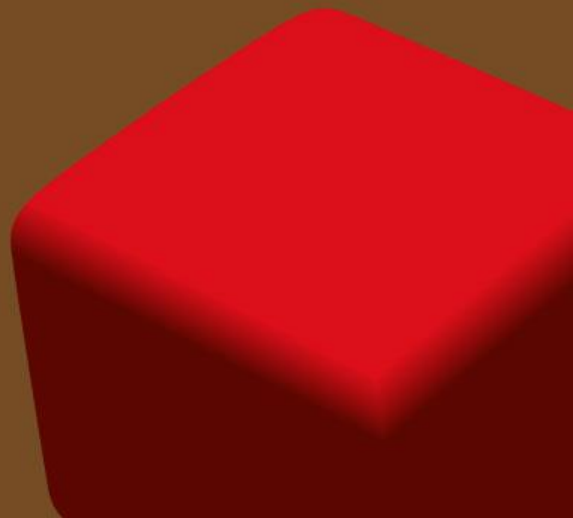
3.Eg-2.47,2.48,2.49,2.50,2.52 + EX2.8-2,4,1,3

4.EX2.7-3,4,5,1,2 + Eg-2.42

5.EX2.6-1,2,3,4 + Eg-2.35,2.31

6.EX2.5-4,5,6,7,8,9 + Eg-2.26,2.28

7.Examples-2.21,2.22 + EX2.4-2(ii),5,6



3. ALGEBRA
(5-MARK QUESTIONS)

EXERCISES

EX.3.1	- 3,4,5
EX.3.3	- 3(i),(ii)
EX.3.7	-2(iv),(v)
EX.3.8	**-1,2,3,4**
EX.3.10	-2
EX.3.12	- All the problems
EX.3.13	- 3,4,5
EX.3.14	- **2,3,4,5,6**
EX.3.18	-4,5,6,7,8,**11,12,13**

EXAMPLES

3.4, 3.8, 3.9,

3.10,3.11,3.18,3.19(i),(ii)

3,21,**3.22,3.23,**3.30,

3.36,3.38,3.40

3,43,3.44,**3.45,3.46,3.47**

3.68,3.69,3.70

***solve by using quadratic equation.**

3. ALGEBRA (2-MARK QUESTIONS)

EXERCISES

(EX3.18-2,3,4,9,10, EX3.17-1 to 8, EX3.16-3 to 7)

EX3.13-1,2,3

EX3.9-2,1

EX3.7-1,2(iii),(ii)

EX3.6-1,2,7, EX3.5-1,2,3

EX3.2-1,EX3.2-1

EXAMPLES

3.64,3.65,3.67,3.55,3.56,

3.41,3.42,3.26,3.19,3.15

3.1,3.2

(HOT-Level)

Define: Diagonal matrix , Scalar matrix, Triangular matrix

4. GEOMETRY (5-MARK QUESTIONS)

EXERCISES

- EX.4.1 - 2,7,5
- EX.4.2 - 4,5,6,7,8,**10,11**
- EX.4.3 - 8,7,4,5
- EX.4.4 - **3**,6,**9**,10,11

EXAMPLES

Theorems: **1**,2,**3**,4,**5**,6

4.9, 4.14, 4.20, **4.21,**

4.22,4.23,**4.25**,4.32,

4.35,4.33

4. GEOMETRY (2-MARK QUESTIONS)

EXERCISES

EX4.1-1,3

EX4.2-1,2,9

EX4.4-1,4,5

EX4.3-1

EXAMPLES

- 4.1,4.2,4.3,4.4,4.5,4.6,4.7,
- 4.8
- 4.12,4.13,4.15,4.16,4.20,4.22,4.24,
- 4.27,4.28

5. COORDINATE GEOMETRY (5-MARK QUESTIONS)

EXERCISES

- EX.5.1 - **5,6,7,**3,4(ii)
- EX.5.2 - **10,11,12,13,14**
- EX.5.3 - **9,**11,6,8,14
- EX.5.4 - 5,6,**7,8,**9,10,11,12

EXAMPLES

- **5.16,5.27,5.28,**
- 5.36,5.37

(HOT-Level)

Write any five various forms of an straight line equations?

5. COORDINATE GEOMETRY (2-MARK QUESTIONS)

EXERCISE

- EX5.1-1,2
- EX5.2-3,5,5,6,9
- EX5.3-12,13,4,3,2,15,6,7
- EX5.5-1,2,3,4

EXAMPLE

- 5.1,5.2,
- 5.8,5.9,5.10,5.11,5.12,5.13
- 5.18,5.19,5.21,5.23,5.25,
- 5.26
- 5.30,5.31,5.33,5.34

6.TRIGNOMETRY (5-MARK QUESTIONS)

EXERCISES

- EX.6.1 - 10,9,8,7,6,4
- EX.6.2 - **3**,4,6,7,8
- EX.6.3 - **3**,4
- EX.6.4 - **1**,**2**,3

EXAMPLES

- 6.7,**6.8**,6.9,**6.11**,6.12,6.13, 6.14,**6.15**,6.16,6.17,
- **6.21**,**6.22**,6.23,6.24,6.25,
- 6.27,**6.28**,6.29,6.30
- **6.31**,**6.32**

6.TRIGNOMETRY (2-MARK QUESTIONS)

EXERCISES

EX6.1-3,5

EX6.2-1,2

EX6.3-1

EXAMPLES

- 6.1,6.2,6.3,6.4,6.5,6.6,6.9,
- 6.10
- 6.18,6.19,6.20
- 6.26

7.MENSURATION (5-MARK QUESTIONS)

EXERCISES

- EX.7.1 - 6,9,10
- EX.7.2 -5,6,7,8,9,10
- EX.7.3 -All the problems
- **EX.7.4 -All the problems**

EXAMPLES

- **7.4,7.7,7.14,7.21,7.22,7.23,7.31**

7.MENSURATION (2-MARK QUESTIONS)

EXERCISES

- EX7.1-1,
- EX7.2-1,2,3
- EX7.4-1

EXAMPLES

- 7.1,7.2,7.3,7.5,8,7.6,7.8,7.9 7.10,7.11
- 7.16,7.17,7.19,7.20
- 7.30

8.STATISTICS AND PROBABILITY (5-MARK QUESTIONS)

EXERCISES

- EX.8.1- **4,5**,10,11,12,13,15
- EX.8.2- 5,**6**,8,10
- EX.8.3 -**7**,8,**9**,**10**,12,14,15
- EX.8.4 - **6**,7,12,**13**,**14**,**11**,**10**,

EXAMPLES

- **8.4**,**8.5**,**8.6**,8.7,**8.10**,8.13
- 8.20,8.22,
- **8.29**,**8.30**,**8.31**,**8.32**,**8.33**

8.STATISTICS AND PROBABILITY (2-MARK QUESTIONS)

EXERCISES

EX8.1-1,2,7,8,9

EX8.2-1,2,3,4

EX8.3-3,4

EX8.4-1,2,3,4,5

EXAMPLES

- **8.1,8.2,8.3**
- **8.15,8.16**
- **8.19,8.21,8.22,8.24,8.25**
- **8.27,8.28,8.30,8.33**

ONLY THE BEST TO REACH THE TOP,
***MATHSTIMES* HELPS TO GET THERE!!!**

WISH YOU ALL THE BEST
BY
DR. K.THIRUMURUGAN

YOUTUBE : MATHSTIMES _THIRUMURUGAN
WWW.MATHSTIMES.COM
+91-9787062570

***NO BLUE PRINT-LEARNING CONTENT AND CONCEPT ARE VERY IMPORTANT.**

PLEASE *SUBSCRIBE* MY CHANNEL

YOUTUBE : MATHSTIMES _THIRUMURUGAN

THANK YOU