Padasalai's Telegram Groups!

(தலைப்பிற்கு கீழே உள்ள லிங்கை கிளிக் செய்து குழுவில் இணையவும்!)

- Padasalai's NEWS - Group
https://t.me/joinchat/NIfCqVRBNj9hhV4wu6_NqA

- Padasalai's Channel - Group
https://t.me/padasalaichannel

- Lesson Plan - Group
https://t.me/joinchat/NIfCqVWwo5iL-21gpzrXLw

- 12th Standard - Group
https://t.me/Padasalai_12th

- 11th Standard - Group
https://t.me/Padasalai_11th

- 10th Standard - Group
https://t.me/Padasalai_10th

- 9th Standard - Group
https://t.me/Padasalai_9th

- 6th to 8th Standard - Group
https://t.me/Padasalai_6to8

- 1st to 5th Standard - Group
https://t.me/Padasalai_1to5

- TET - Group
https://t.me/Padasalai_TET

- PGTRB - Group
https://t.me/Padasalai_PGTRB

- TNPSC - Group
https://t.me/Padasalai_TNPSC

GRAPH

(Fully solved for better understanding and to work out easily)

MATHEMATICS

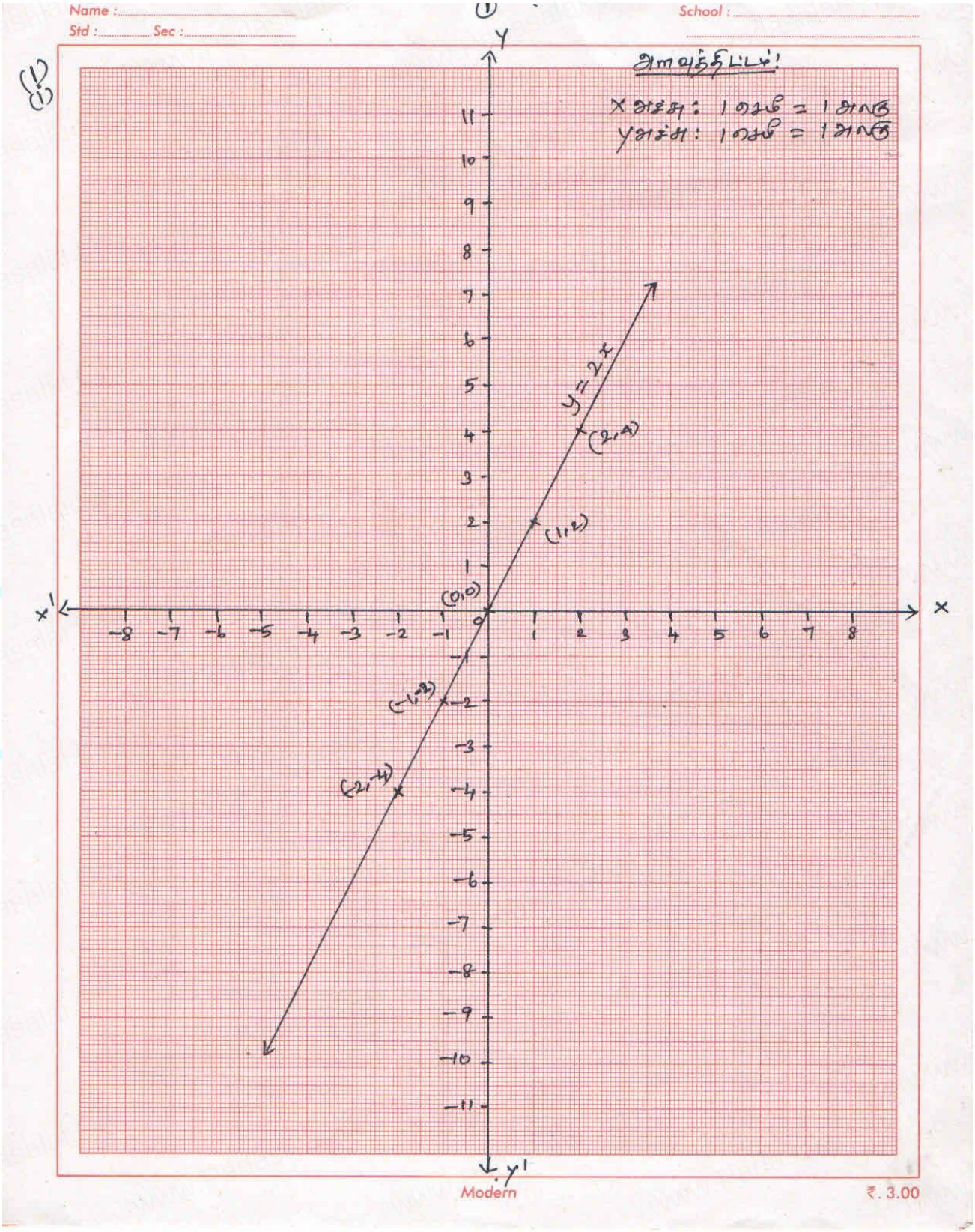
(SAMACHEERKALVI - NEW SYLLABUS)

HARDWORK IS THE BEST WEAPON TO DEFEAT FAILURE

SELF CONFIDENCE +HARDWORK = SUCCESS

IX- STANDARD

PREPARED BY,
A.HAJA MOHAIDHEEN, M.Sc., B.Ed.,
G.H.S, KONUR, VILLUPURAM
CELL: 9952795956


Name :
Std : Sec :
School :
(i)
(i)
(i)
அளவுத்திட்டம்:
x அச்சு : 1 மற்ற = 1 அலகு
y அச்சு : 1 மற்ற = 1 அலகு
Y
Y'
X
X'
y = 2x
(2,4)
(1,2)
(0,0)
(-1,-2)
(-2,-4)
Modern
₹. 3.00

EX. NO. 3.10 **Page no:124**

1. Draw the graph for the following

(i). y= 2x

x	-2	-1	0	1	2
y	-4	-2	0	2	4

Points: **(-2,-4), (-1, -2), (0, 0), (1, 2), (2 4)**

Plot the points on the graph sheet and join them by a straight line

Scale:

X axis : 1 c.m. = 1 unit

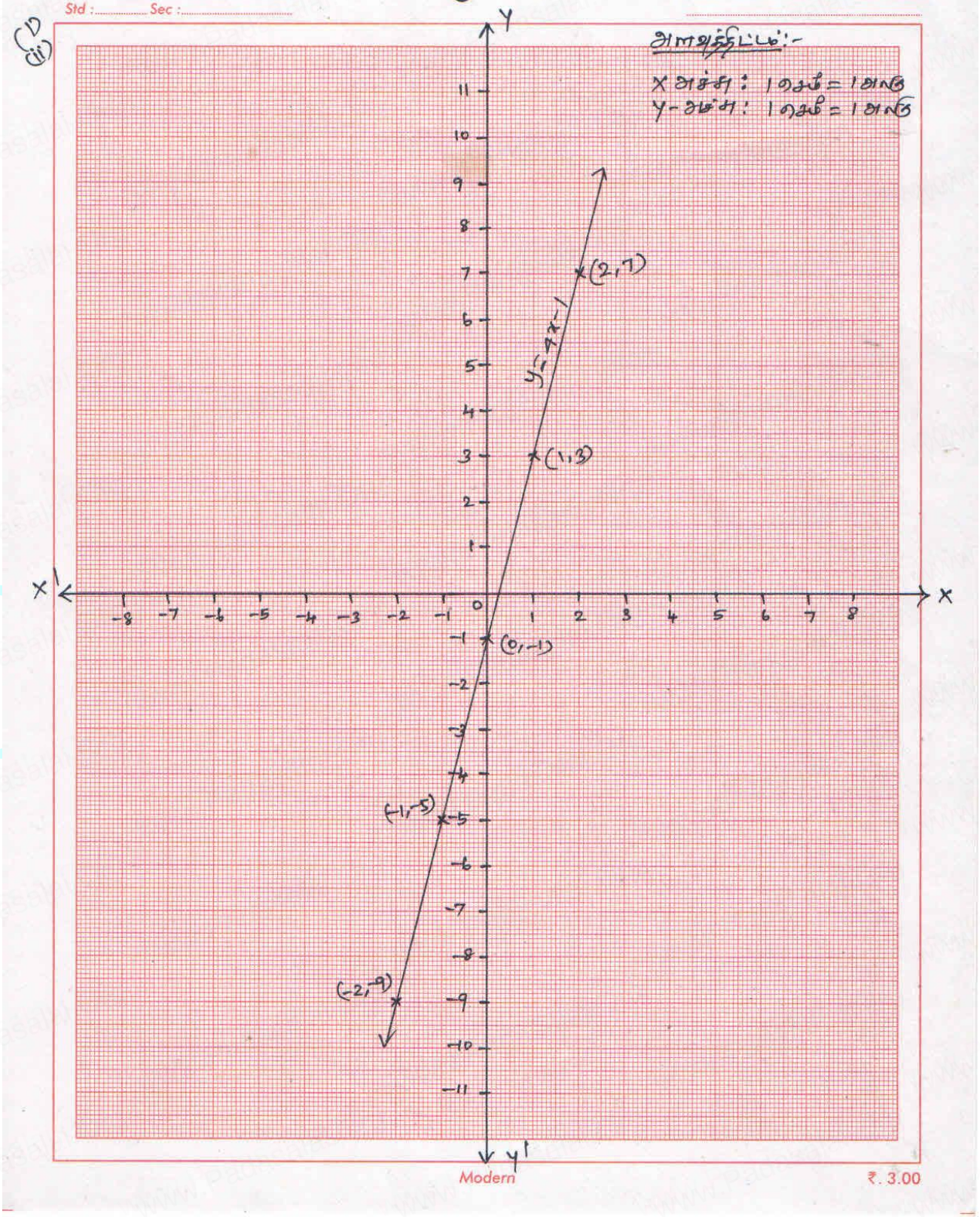
Y axis : 1 c.m.. = 1 unit

Name :
Std : Sec :
School :

(3)

(ii)

அளவுத்திட்டம்:-
X அச்சு : 1 அலகு = 1 அலகு
Y-அச்சு : 1 அலகு = 1 அலகு



Modern

₹. 3.00

1. (ii) **y=4x-1**

x	**-2**	**-1**	**0**	**1**	**2**
4x	**-8**	**-4**	**0**	**4**	**8**
-1	**-1**	**-1**	**-1**	**-1**	**-1**
y	**-9**	**-5**	**-1**	**3**	**7**

Points: **(-2,-9), (-1, -5), (0, -1), (1, 3), (2 7)**

Plot the points on the graph sheet and join them by a straight line

Scale:

X axis : 1 c.m. = 1 unit

Y axis : 1 c.m.. = 1 unit

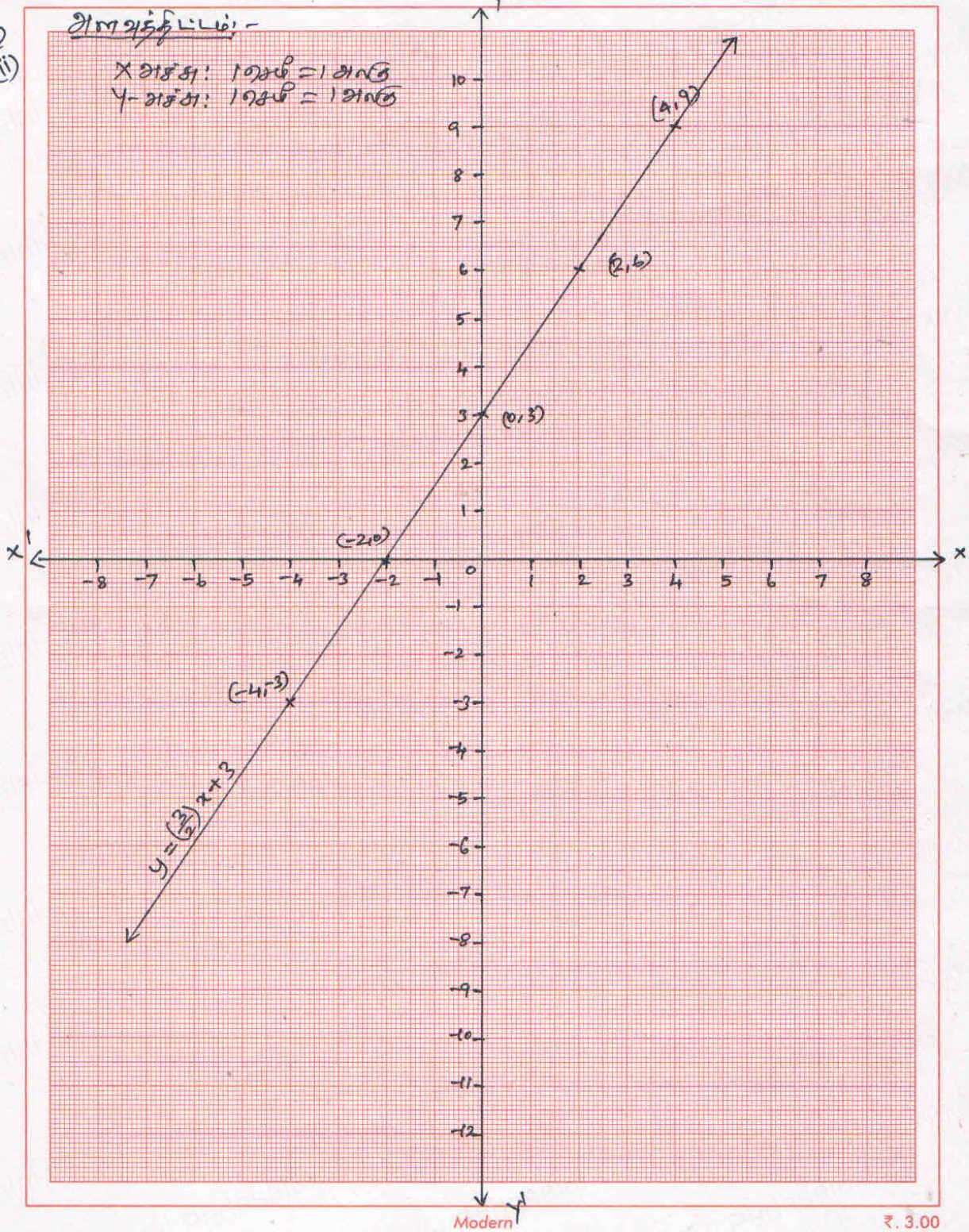
Name :
Std : Sec :
School :

(5)

(i) (iii)

அளவுகோல்:-

X அச்சு: 1 அலகு = 1 அலகு
Y- அச்சு: 1 அலகு = 1 அலகு



Modern

₹. 3.00

1.(iii). **y=(3/2)x+3**

x	-4	-2	0	2	4
3x	-12	-6	0	6	12
3x/2	-6	-3	0	3	6
3	3	3	3	3	3
y	-3	0	3	6	9

Points: **(-4,-3), (-2, 0), (0, 3), (2, 6), (4, 9)**

Plot the points on the graph sheet and join them by a straight line

Scale:

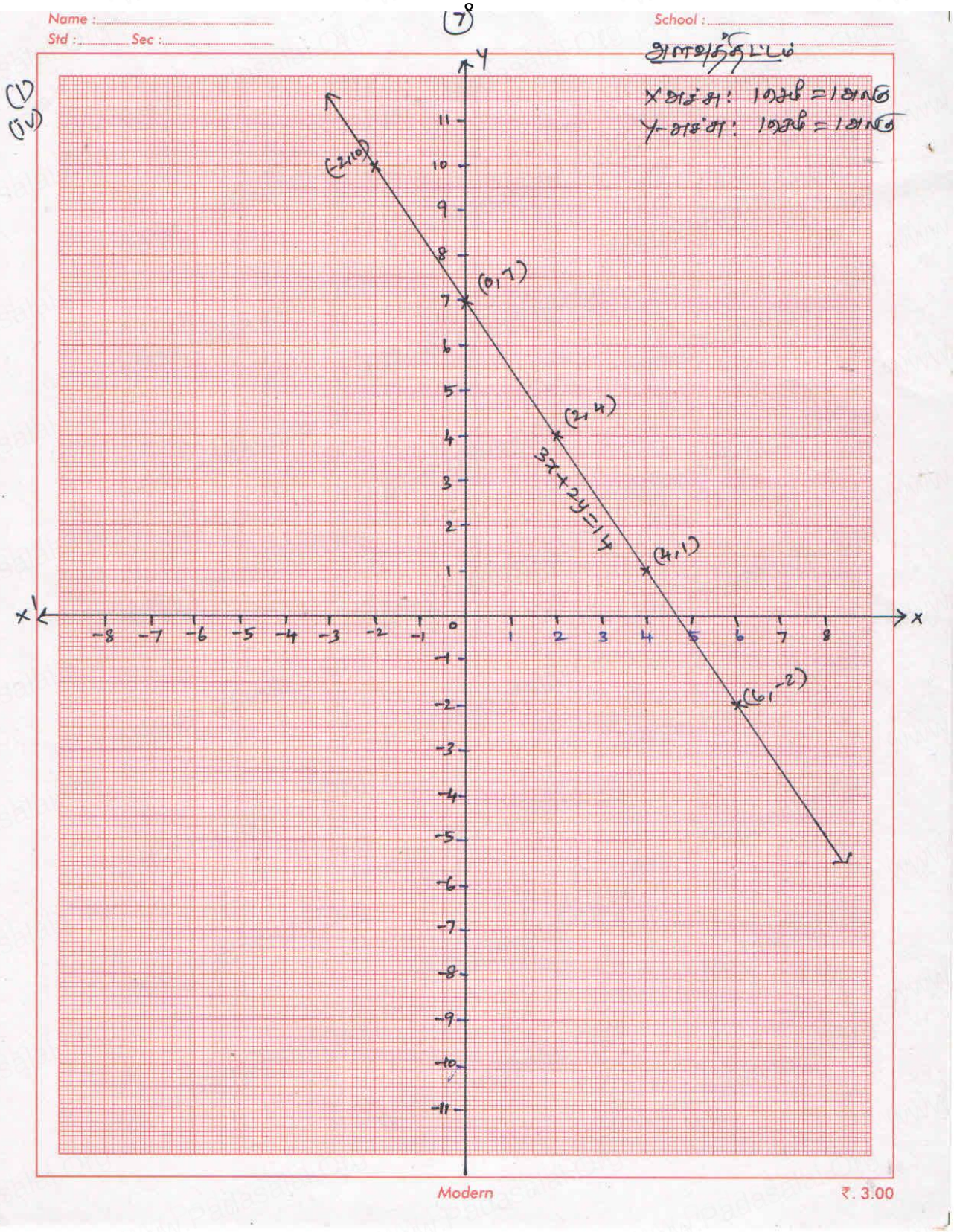
X axis : 1 c.m. = 1 unit

Y axis : 1 c.m.. = 1 unit

Name :
Std : Sec :

(7)

School :



Modern ₹. 3.00

1. (iv). **3x + 2y =14;** **2y= -3x+14**

y= -3x/2 +7

x	-2	0	2	4	6
-3x	**6**	**0**	**-6**	**-12**	**-18**
-3x/2	**3**	**0**	**-3**	**-6**	**-9**
7	**7**	**7**	**7**	**7**	**7**
y	**10**	**7**	**4**	**1**	**-2**

Points: **(-2, 10), (0, 7), (2, 4), (4, 1), (6, -2)**

Plot the points on the graph sheet and join them by a straight line

Scale:

X axis : 1 c.m. = 1 unit

Y axis : 1 c.m.. = 1 unit

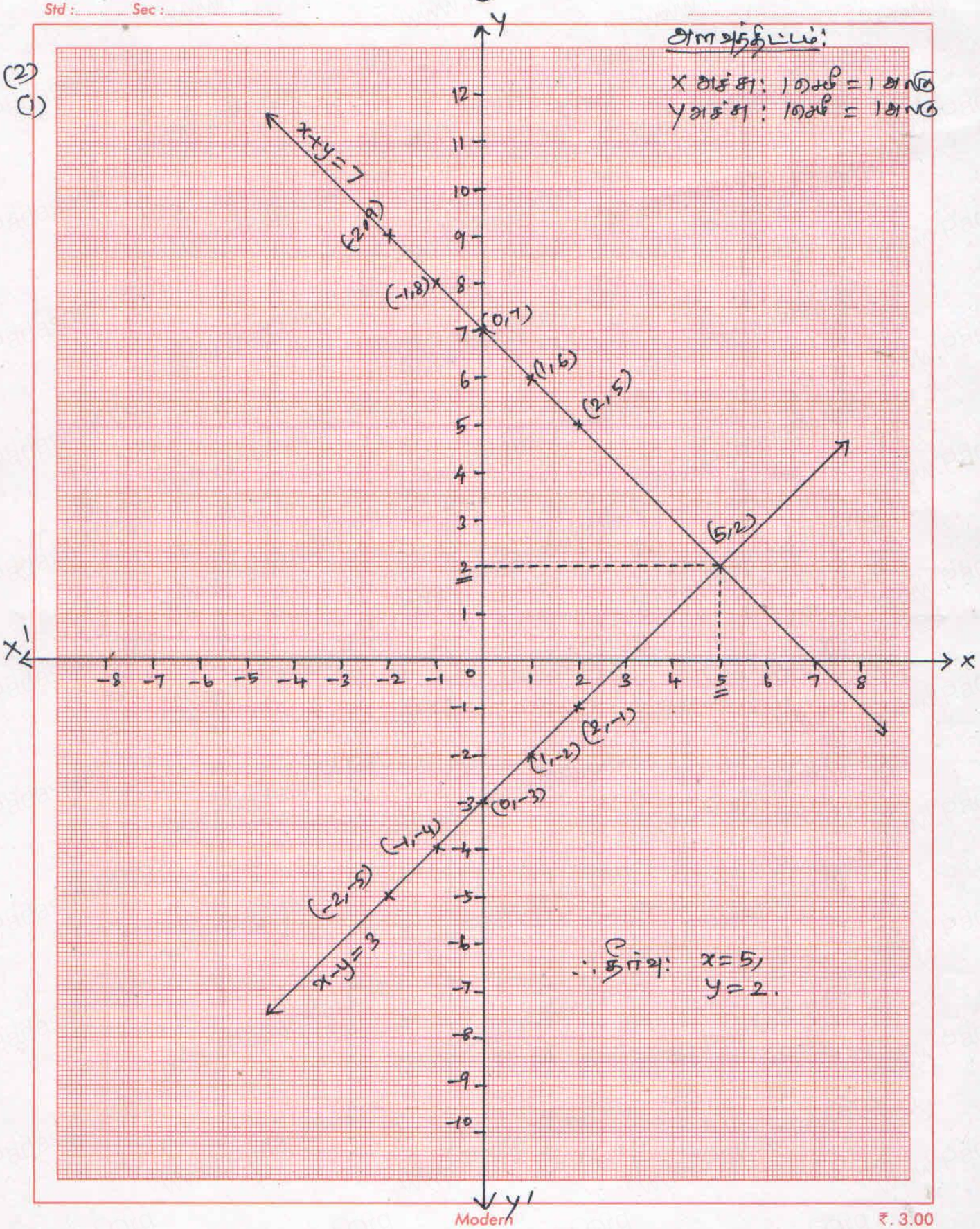
Name : School :

Std : Sec :

(9)

(2)

(1)



வரைபடம்:

x அச்சு: 1 அலகு = 1 அலகு

y அச்சு: 1 அலகு = 1 அலகு

∴ தீர்வு: $x = 5$, $y = 2$.

2. (i). x + y = 7;

y=7-x

x	-2	-1	0	1	2
-x	2	1	0	-1	-2
7	7	7	7	7	7
y	9	8	7	6	5

Points: **(-2, 9), (-1, 8), (0, 7), (1, 6), (2, 5)**

x-y=3

y=x-3

x	-2	-1	0	1	2
-3	-3	-3	-3	-3	-3
y	-5	-4	-3	-2	-1

Points: **(-2,-5), (-1, -4), (0, -3), (1, -2), (2, -1)**

Plot the points on the graph sheet and join them by a straight line

Scale:

X axis : 1 c.m. = 1 unit

Y axis : 1 c.m.. = 1 unit

Two straight lines intersect at the point (5, 2)

∴ Solution: **x= 5, y=2**

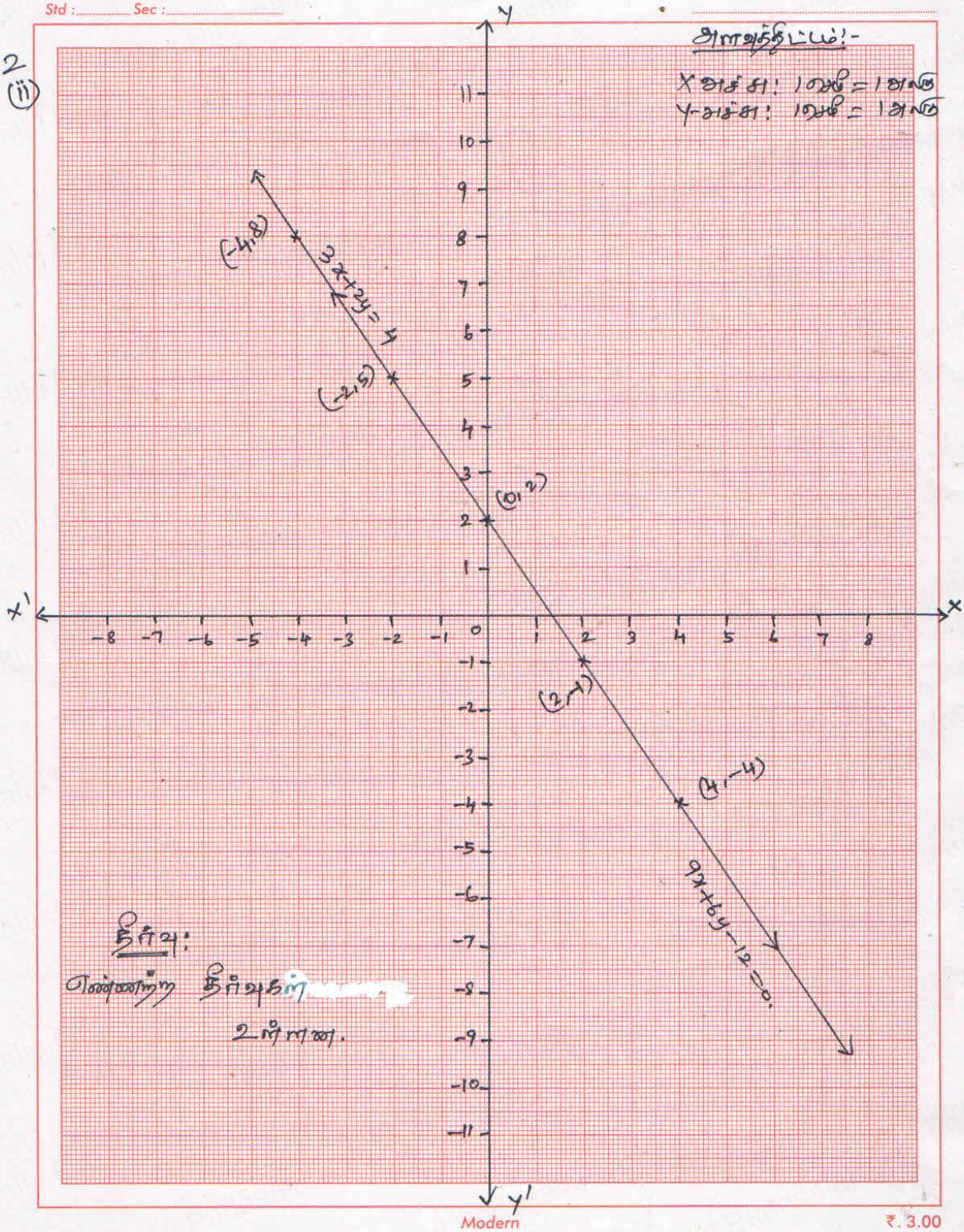
Name :
Std : Sec :
School :

(ii)

2 (ii)

அளவுத்திட்பம்:-

X அச்சு : 1 அலகு = 1 அலகு
Y-அச்சு : 1 அலகு = 1 அலகு



தீர்வு:

வேண்டிய தீர்வுகள்

2 ஆர்வு.

Modern

₹. 3.00

2.(ii). 3x + 2y = 4;

2y= -3x+4

y= -3x/2 +2

x	-4	-2	0	2	4
-3x	12	6	0	-6	-12
-3x/2	6	3	0	-3	-6
2	2	2	2	2	2
y	8	5	2	-1	-4

Points: **(-4, 8), (-2, 5), (0, 2), (2, -1), (4, -4)**

9x + 6y - 12 = 0

Divide by 3 on both sides

3x + 2y - 4=0;

y= -3x/2 +2

x	-4	-2	0	2	4
-3x	12	6	0	-6	-12
-3x/2	6	3	0	-3	-6
2	2	2	2	2	2
y	8	5	2	-1	-4

Points:: **(-4, 8), (-2, 5), (0, 2), (2, -1), (4, -4)**

Plot the points on the graph sheet and join them by a straight line

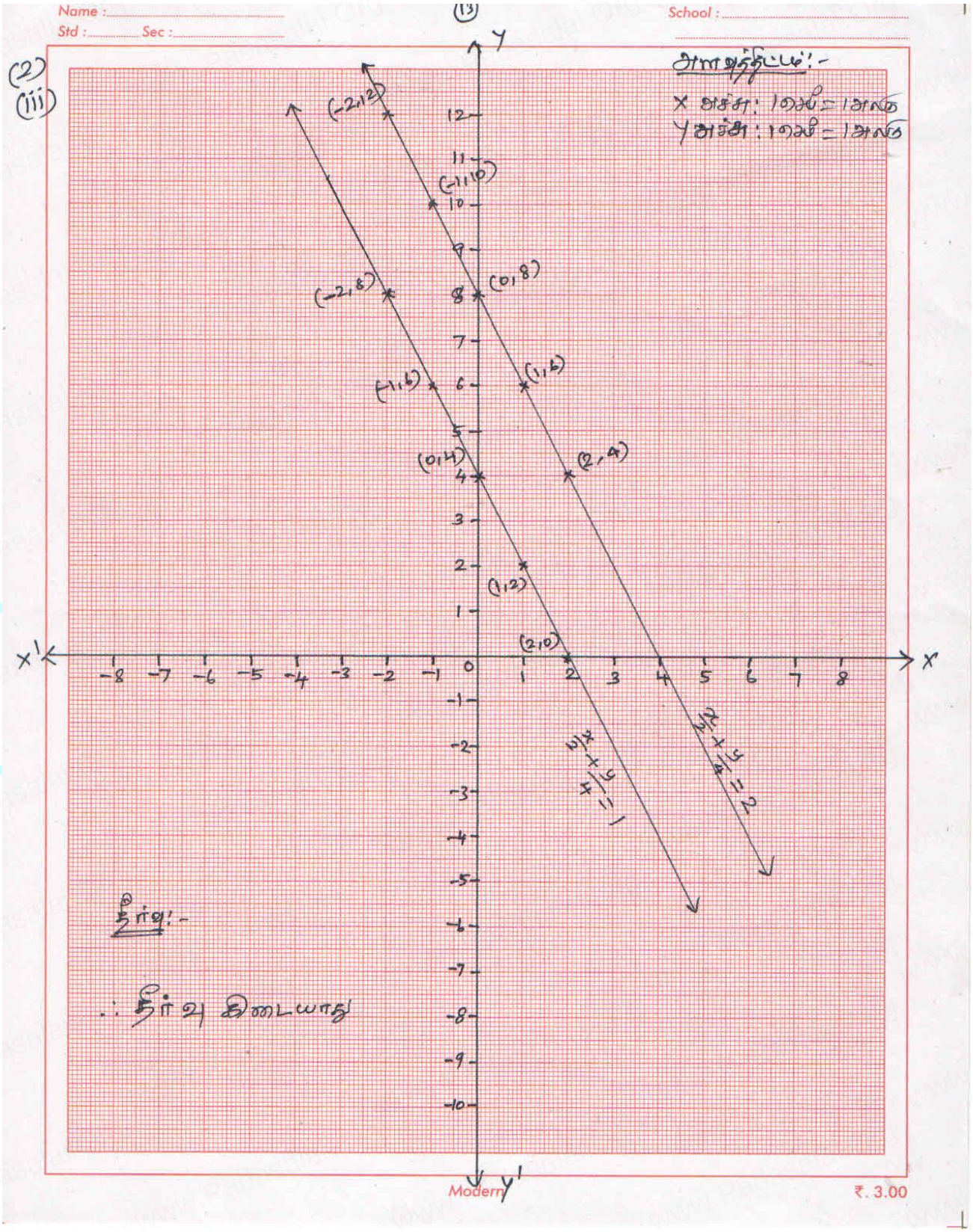
Scale:

X axis : 1 c.m. = 1 unit

Y axis : 1 c.m.. = 1 unit

Two straight lines lie on each other.

∴ **There are infinitely many solutions.**


Name :
Std : Sec :
School :
(13)
(2)
(iii)
அளவுகோல்:-
x அச்சு: 1செமீ = 1அலகு
y அச்சு: 1செமீ = 1அலகு
(-2,12)
(-1,10)
(-2,8)
(0,8)
(-1,6)
(1,6)
(0,4)
(2,4)
(1,2)
(2,0)
x + y = 12
2x + y = 4
x + y = 11
x'
x
y
y'
தீர்வு:-
∴ தீர்வு இல்லை
Modern
₹. 3.00

2.(iii). x/2 +y/4 =1

Multiply by 4 on both sides

(x/2) x4 +(y/4) x4 = 1 x 4

2x + y= 4

y= -2x +4

x	-2	-1	0	1	2
-2x	4	2	0	-2	-4
4	4	4	4	4	4
y	8	6	4	2	0

Points: **(-2, 8), (-1, 6), (0, 4), (1, 2), (2, 0)**

x/2 +y/4 =2

Multiply by 4 on both sides

(x/2) x4 +(y/4) x4 = 2 x 4

2x + y= 8

y= -2x +8

x	-2	-1	0	1	2
-2x	4	2	0	-2	-4
8	8	8	8	8	8
y	12	10	8	6	4

Points: **(-2, 12), (-1, 10), (0, 8), (1, 6), (2, 4)**

Plot the points on the graph sheet and join them by a straight line

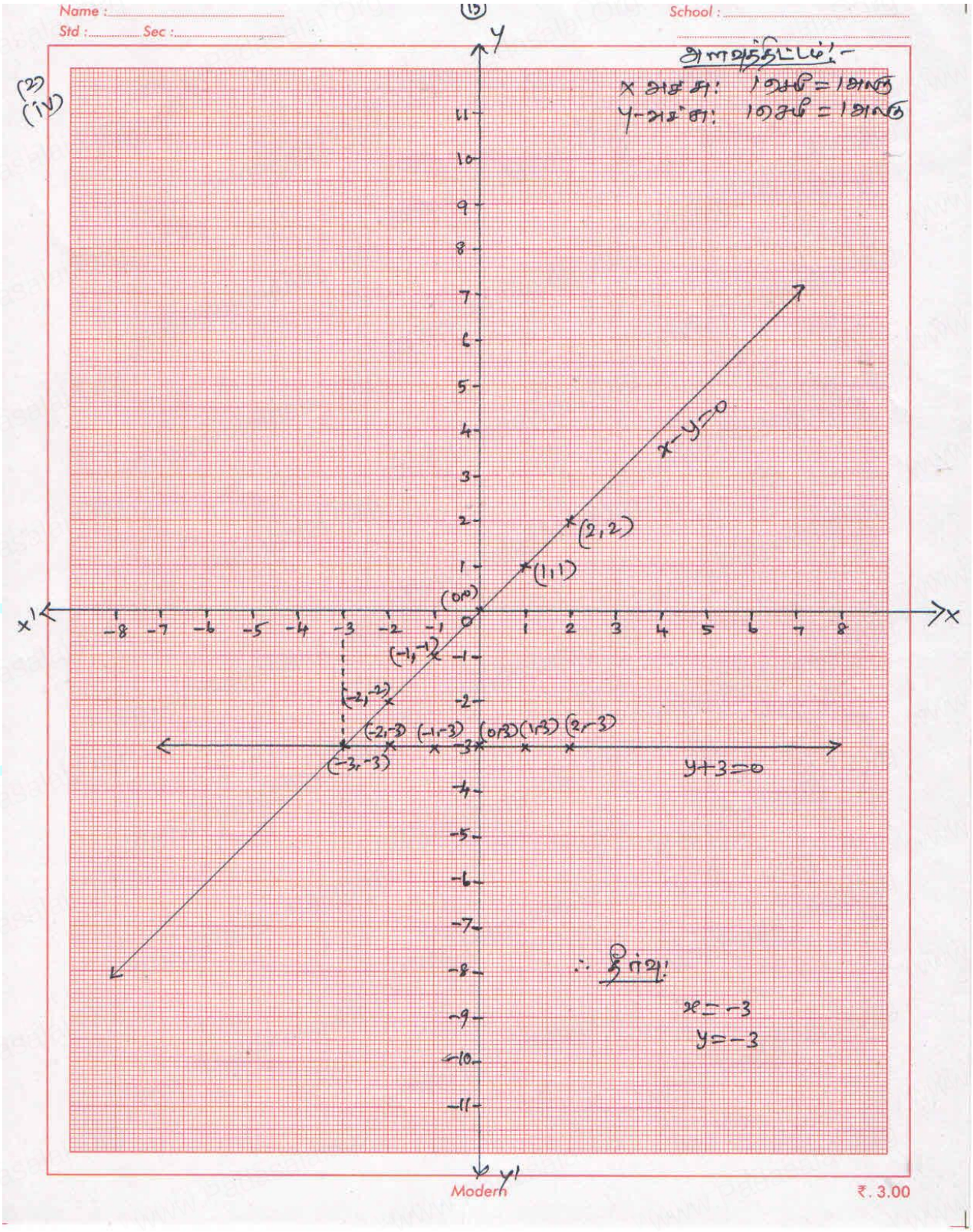
Scale:

X axis : 1 c.m. = 1 unit

Y axis : 1 c.m.. = 1 unit

Two straight lines didn't intersect each other

∴ **There is <u>no</u> solution**


Name :
Std : Sec :
School :
(ii)
(iv)
y
y'
x
x'
x-y=0
y+3=0
(2,2)
(1,1)
(0,0)
(-1,-1)
(-2,-2)
(-3,-3)
(-2,-3) (-1,-3) (0,-3) (1,-3) (2,-3)
∴ தீர்வு:
x = -3
y = -3
Modern
₹. 3.00

2.(iv). x - y = 0;

y= x

x	-2	-1	0	1	2
y	-2	-1	0	1	2

Points: **(-2, -2), (-1, -1), (0, 0), (1, 1), (2, 2)**

y + 3 = 0

y= - 3

x	-2	-1	0	1	2
y	-3	-3	-3	-3	-3

Points: **(-2,-3), (-1, -3), (0, -3), (1, -3), (2, -3)**

Plot the points on the graph sheet and join them by a straight line

Scale:

X axis : 1 c.m. = 1 unit

Y axis : 1 c.m.. = 1 unit

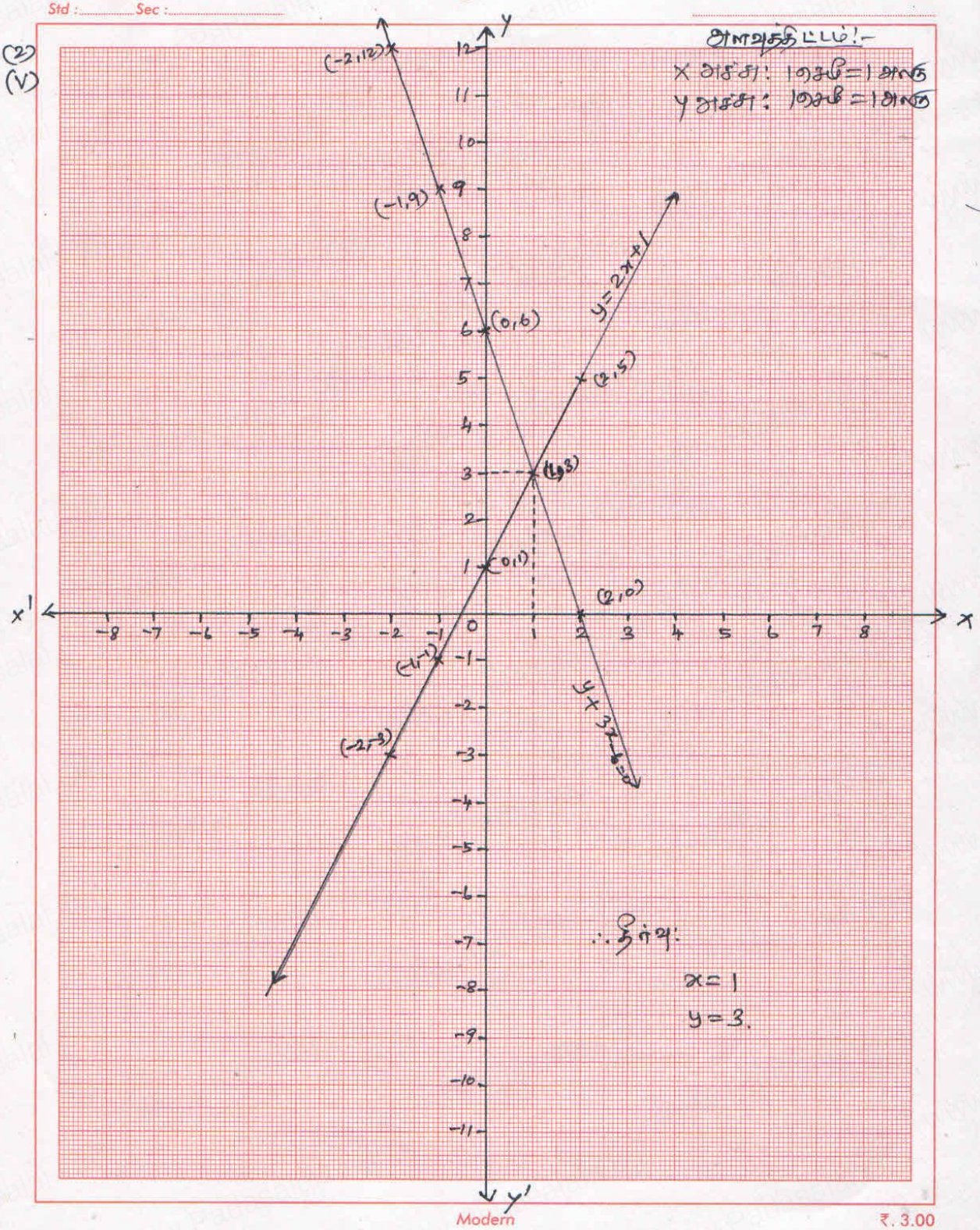
Two straight lines intersect at the point (-3, -3)

∴ Solution : **x= -3, y= -3**

Name :
Std : Sec :
School :

(17)

(2)
(V)



x அச்சு: 1 அலகு = 1 அலகு
y அச்சு: 1 அலகு = 1 அலகு

∴ தீர்வு:

$x = 1$

$y = 3.$

Modern ₹. 3.00

2.(v). y = 2x + 1;

x	-2	-1	0	1	2
2x	-4	-2	0	2	4
1	1	1	1	1	1
y	-3	-1	1	3	5

Points: **(-2, -3), (-1, -1), (0, 1), (1, 3), (2, 5)**

y + 3x - 6 = 0

y= - 3x +6

x	-2	-1	0	1	2
-3x	6	3	0	-3	-6
6	6	6	6	6	6
y	12	9	6	3	0

Points: **(-2, 12), (-1, 9), (0, 6), (1, 3), (2, 0)**

Plot the points on the graph sheet and join them by a straight line

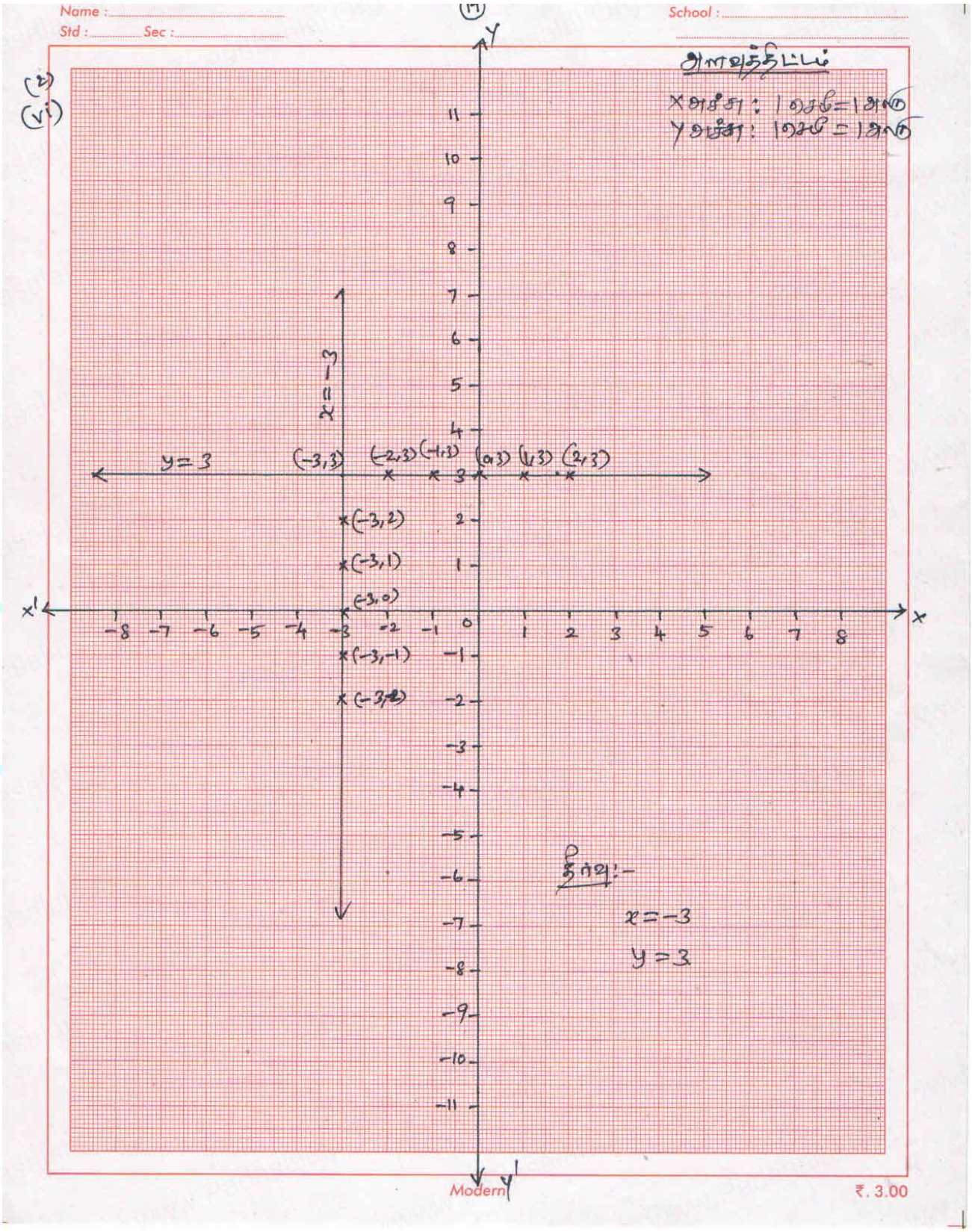
Scale:

X axis : 1 c.m. = 1 unit

Y axis : 1 c.m.. = 1 unit

Two straight lines intersect at the point **(1, 3)**

∴ Solution : **x= 1, y= 3**



2.(vi). x=-3; y=3

x	-3	-3	-3	-3	-3
y	-2	-1	0	1	2

Points: **(-3, -2), (-3, -1), (-3, 0), (-3, 1), (-3, 2)**

x	-2	-1	0	1	2
y	3	3	3	3	3

Points: **(-2, 3), (-1, 3), (0, 3), (1, 3), (2, 3)**

Plot the points on the graph sheet and join them by a straight line

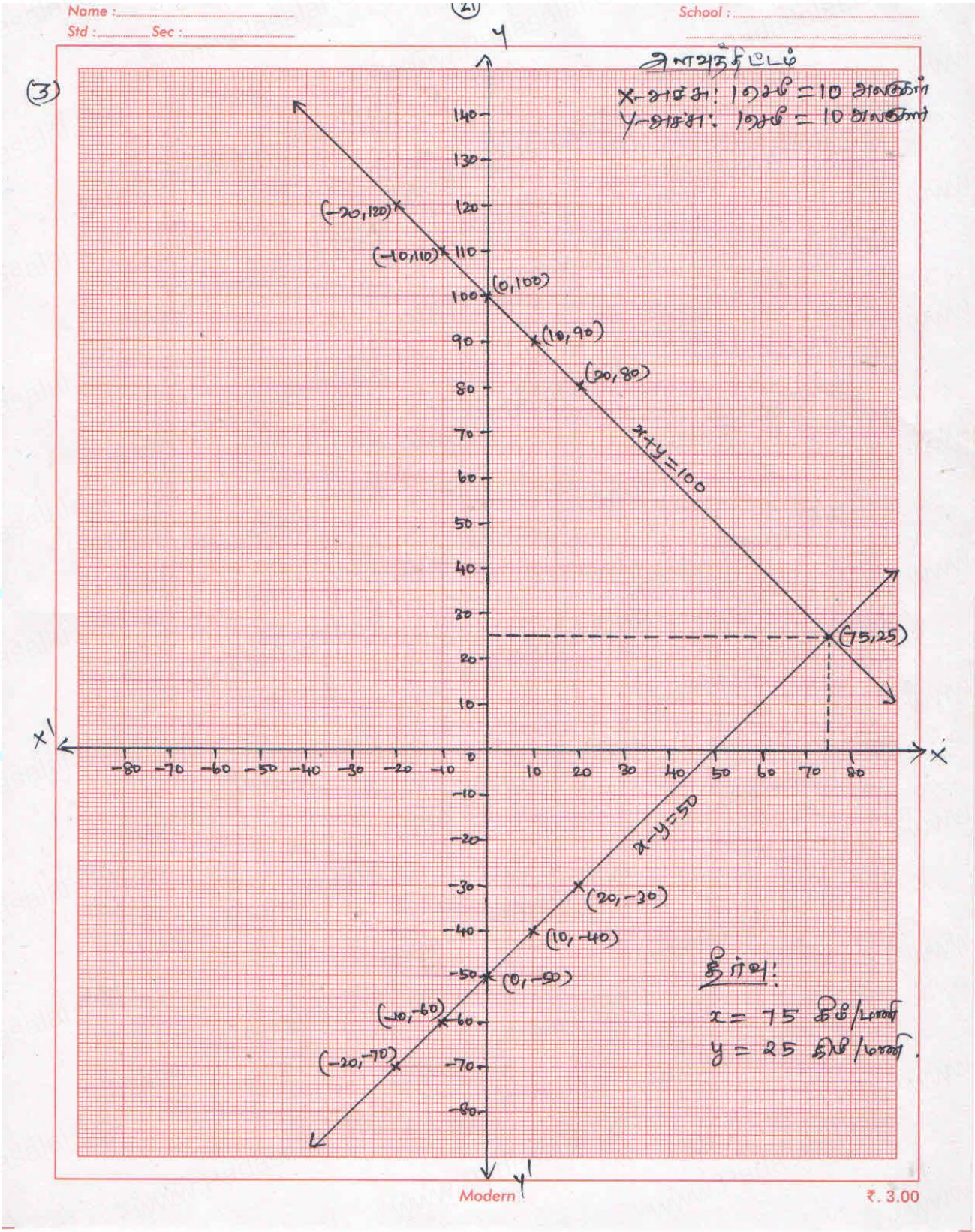
Scale:

X axis : 1 c.m. = 1 unit

Y axis : 1 c.m.. = 1 unit

Two straight lines intersect at the point **(-3, 3)**.

∴ Solution : **x= -3, y= 3**



3) Distance= 100 miles

Speed of first car = x mile/hour

Speed of Second car = y mile/hour

Opposite direction

Speed of both car = x+y mile/hour; Time= 1 hour

Speed x Time = Distance

(x+y) x 1= 100; x +y =100

y= 100-x

x	-20	-10	0	10	20
-x	20	10	0	-10	-20
100	100	100	100	100	100
y	120	110	100	90	80

Points: **(-20, 120), (-10, 110), (0, 100), (10, 90), (20, 80),**

Same direction

Speed of both car = x-y mile/hour; Time = 2 hours

Speed x Time = Distance

(x-y) x 2= 100; x - y =50

y= x -50

x	-20	-10	0	10	20
-50	-50	-50	-50	-50	-50
y	-70	-60	-50	-40	-30

Points: **(-20, -70), (-10, 60), (0, -50), (10, -40), (20, -30)**

Plot the points on the graph sheet and join them by a straight line

Scale:

X axis : 1 c.m. = 10 units

Y axis : 1 c.m.. = 10 units

Two straight lines intersect at the point **(75, 25)**

∴ **Solution:**

Speed of first car = 75 mile /hour

Speed of Second car = 25 mile /hour