

868



TUTORS

Preparation for

High School Mathematics

Straight Line Graphs

Math



Instructions and Tips:

- ✓ **You have 90 minutes to complete this worksheet**
- ✓ **This worksheet consists of 8 questions**
- ✓ **Write answers in the spaces provided**
- ✓ **All working must be clearly shown**
- ✓ **Label Graphs properly**



Student Name: _____

Student ID: _____

Date: __ / __ / ____

Total Score:

Highest Score:

Tutor's Comments:

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Question 1

Consider the straight line equation: $y = x + 1$.

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

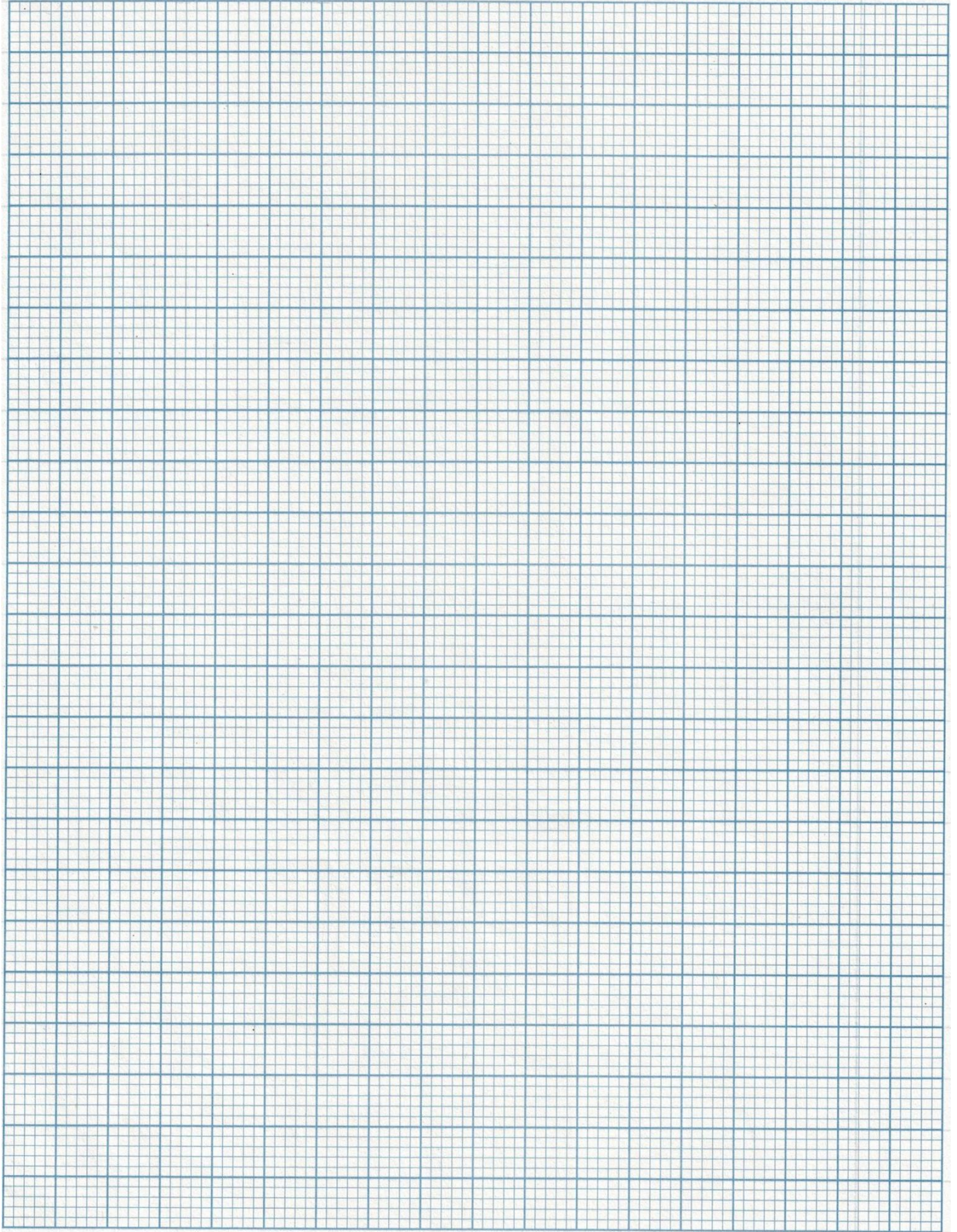
(a) Complete the table above for: $y = x + 1$.



(4 marks)

(b) On the graph paper on the next page, draw the graph of $y = x + 1$ using the table above. Use a scale of 2 cm = 1 unit on the x-axis and 2 cm = 1 unit on the y-axis.

(6 marks)



Question 2

Consider the straight line equation: $y = x + 2$.

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

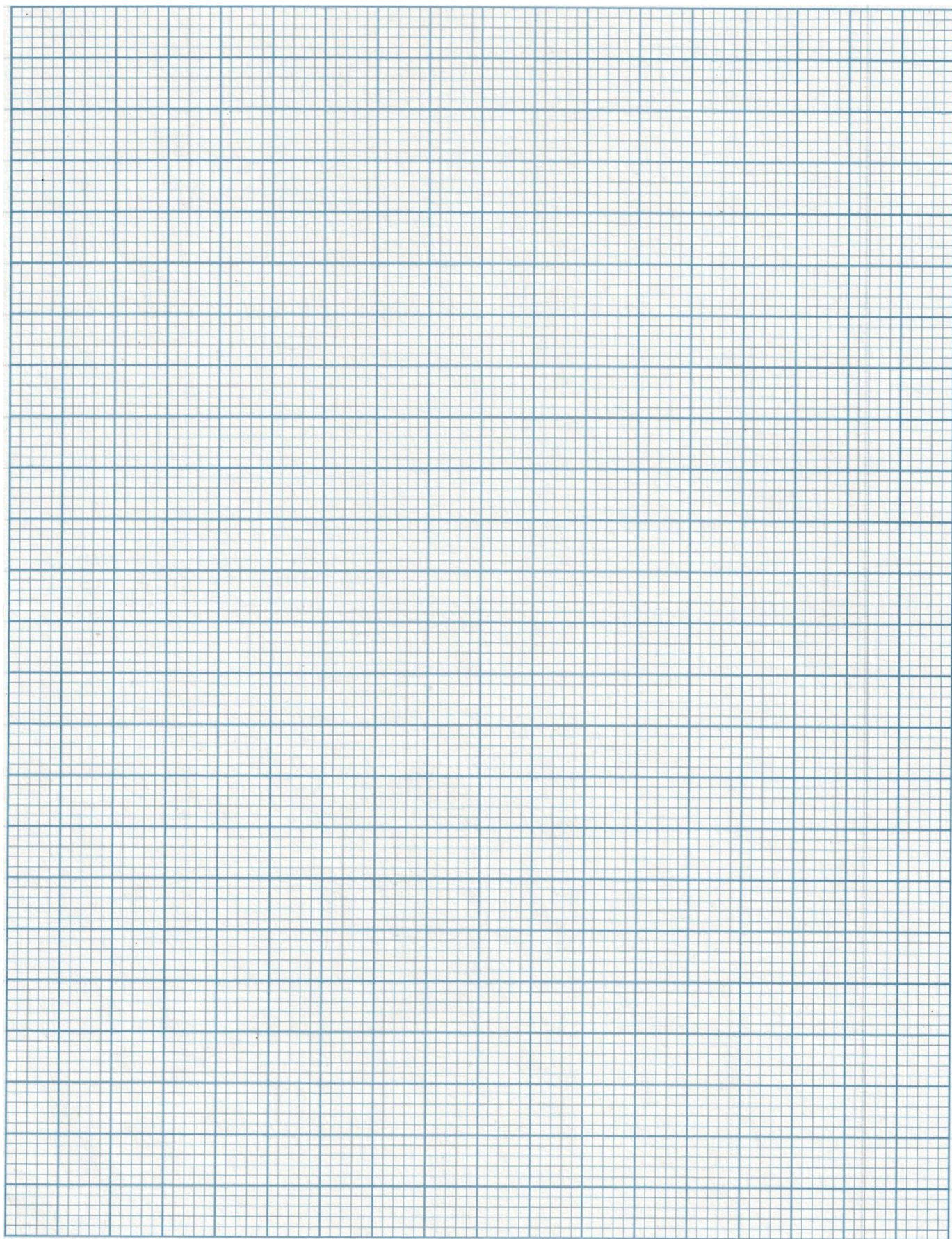
(a) Complete the table above for: $y = x + 2$.



(4 marks)

(b) On the graph paper on the next page, draw the graph of $y = x + 2$ using the table above. Use an appropriate scale.

(6 marks)



Question 3

Consider the straight line equation: $y = x - 3$.

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

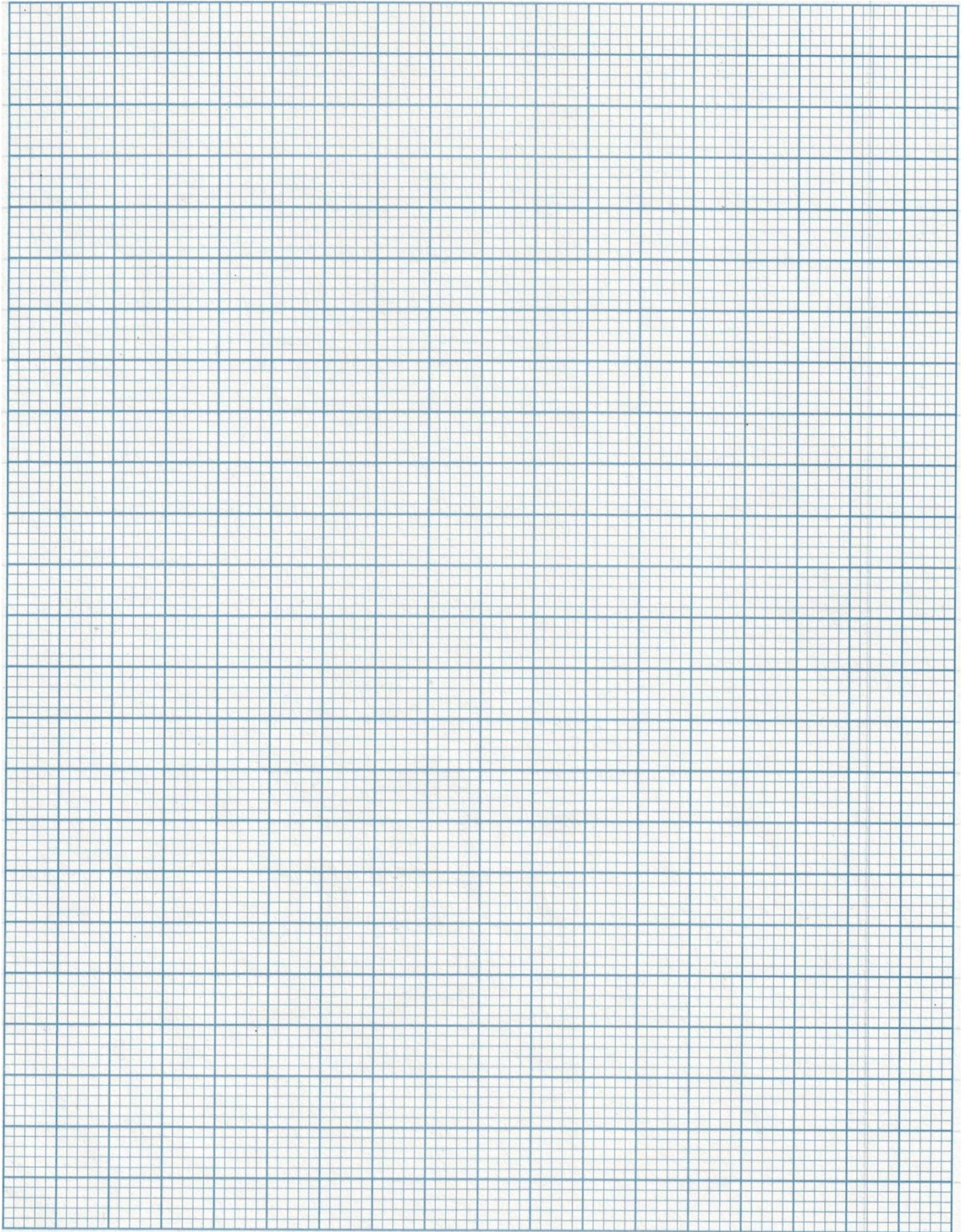
(a) Complete the table above for: $y = x - 3$.



(5 marks)

(b) On the graph paper on the next page, draw the graph of $y = x - 3$ using the table above. Use an appropriate scale.

(6 marks)



Question 4

Consider the straight line equation: $y = 2x + 4$.

x	-3	-2	-1	0	1	2	3
y	-2						10

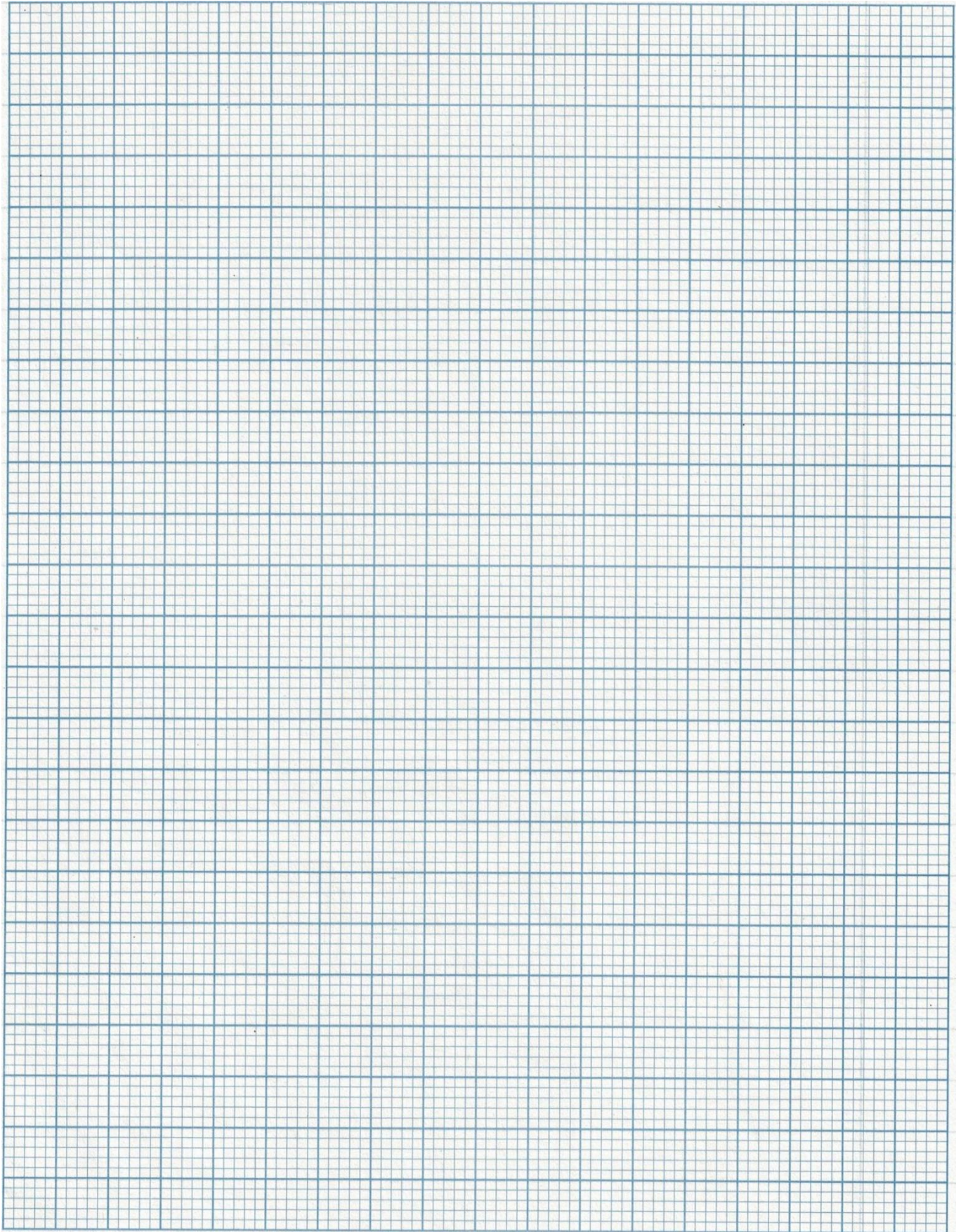
(a) Complete the table above for: $y = 2x + 4$.



(5 marks)

(b) On the graph paper on the next page, draw the graph of $y = 2x + 4$ using the table above. Use an appropriate scale.

(6 marks)



Question 5

Consider the straight line equation: $y = 2x - 3$.

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

(a) Complete the table above for: $y = 2x - 3$.



(7 marks)

(b) On the graph paper on the next page, draw the graph of $y = 2x - 3$ using the table above. Use an appropriate scale.

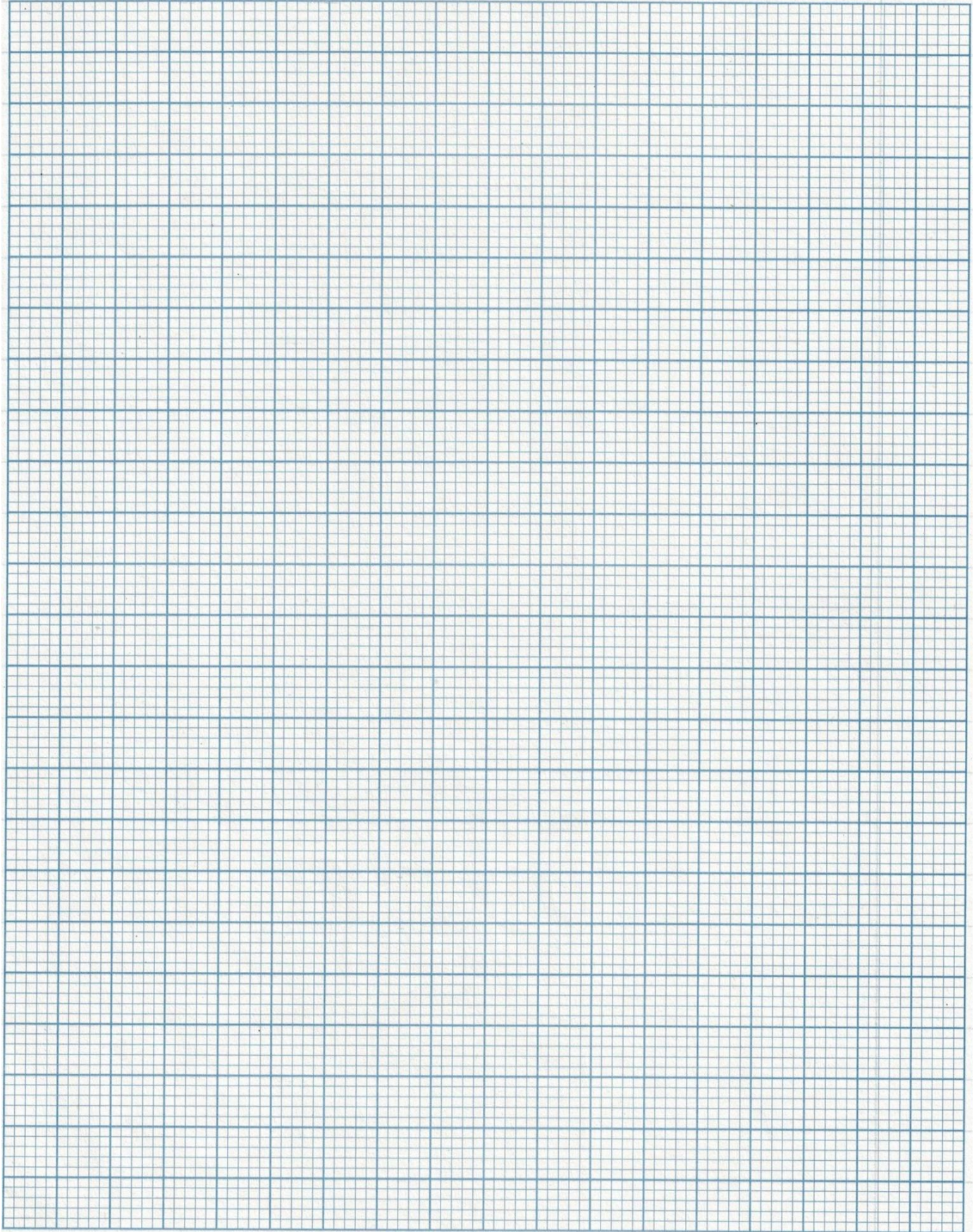
(4 marks)

Complete the following statements.

(c) The gradient of the straight line $y = 2x - 3$ is : _____

(d) The y-intercept of the straight line $y = 2x - 3$ is : _____

(2 marks)



Question 6

Consider the straight line equation: $y = \frac{1}{2}x + 3$

x	-3	-2	-1	0	1	2	3	4	5	6
y										

(a) Complete the table above for: $y = \frac{1}{2}x + 3$.

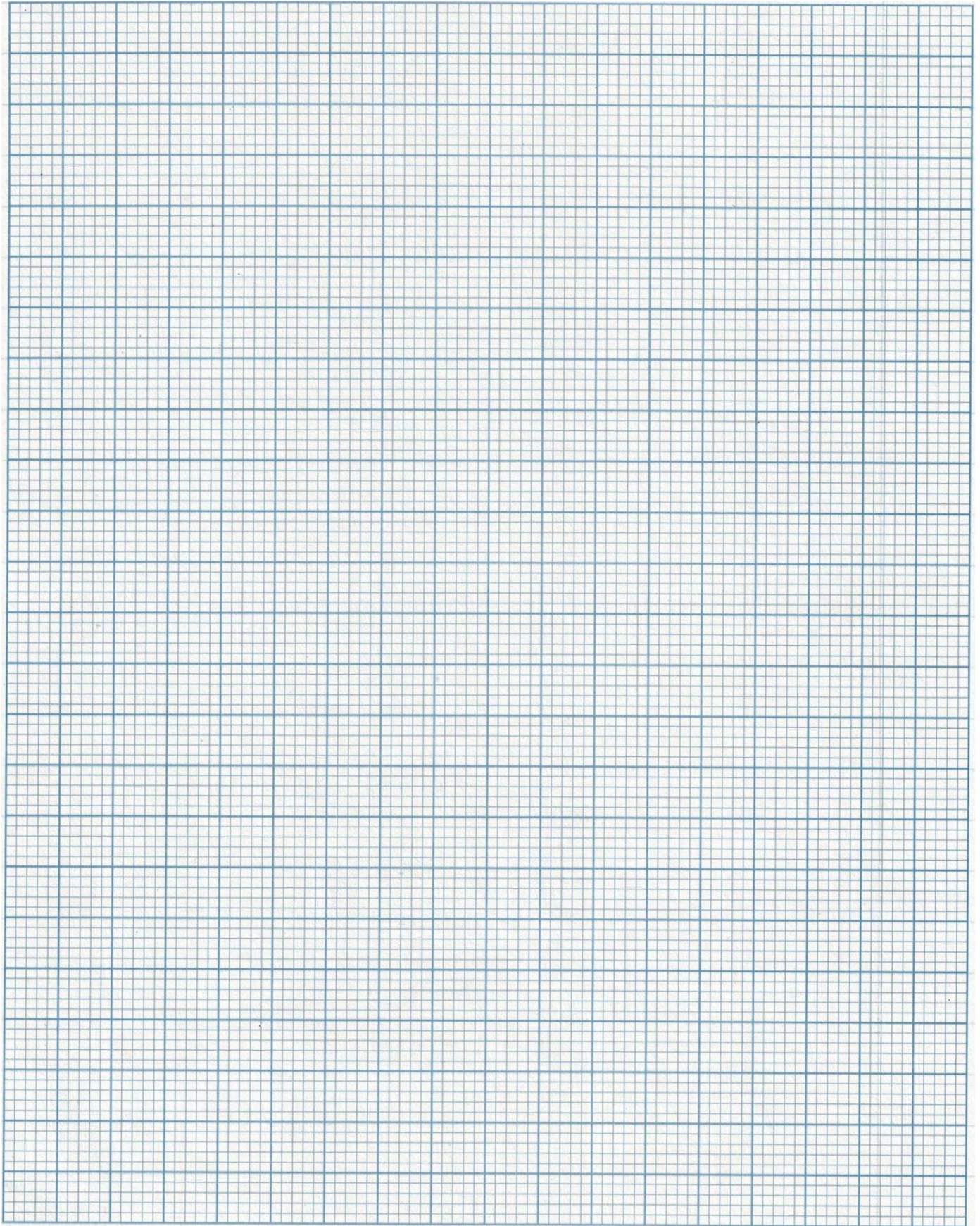


(10 marks)

(b) On the graph paper on the next page, draw the graph of

$y = \frac{1}{2}x + 3$ using the table above. Use an appropriate scale.

(6 marks)



Question 7

Consider the straight line equation: $y = -\frac{1}{2}x + 3$

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

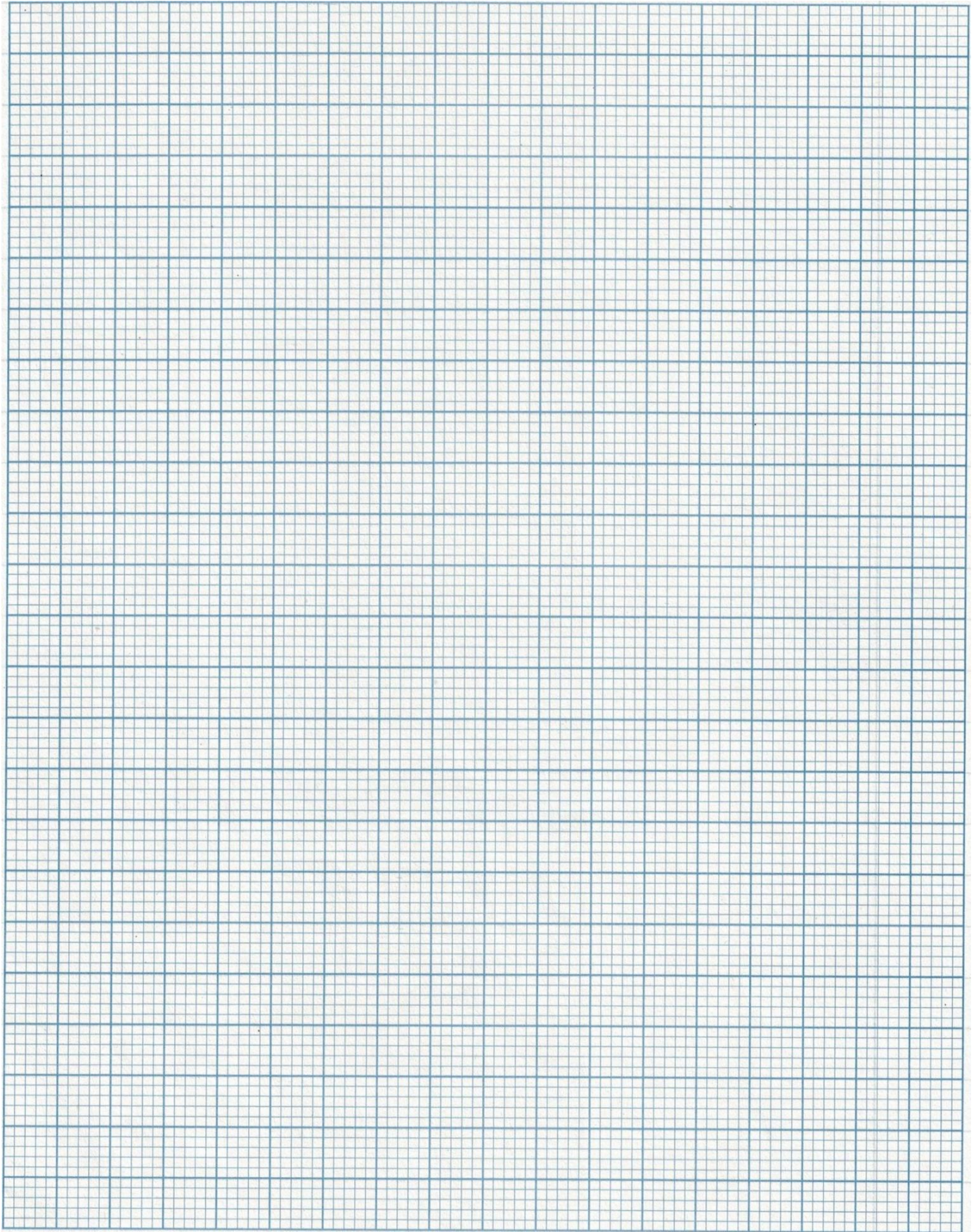
(a) Complete the table above for: $y = -\frac{1}{2}x + 3$



(8 marks)

(b) On the graph paper on the next page, draw the graph of $y = -\frac{1}{2}x + 3$ using the table above. Use an appropriate scale.

(6 marks)



Question 8

Determine whether the following pairs of lines are perpendicular or parallel to one another. Give an explanation in each case.

(a) $y = 2x + 3$ and $y = 2x - 3$

(b) $y = 3x + 8$ and $y = -\frac{1}{3}x + 4$



(c) $2y = 10x + 1$ and $3y = 15x + 3$

(d) $6y = 1x + 4$ and $2y = -12x + 8$

(8 marks)



END OF WORKSHEET

