Algebra 1

Topic: Graphing Linear Equations in Slope-Intercept Form

Instructions

Solve the following problems. Use graphs where necessary. Show all work clearly.

Practice Problems

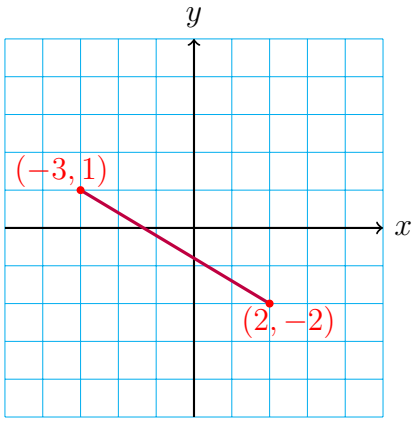
1. **Find the slope and the y-intercept of the graph of the linear equation.**

   (i) $y = -2x + 5$
   (ii) $y = 3x - 7$
   (iii) $y = 4x$
   (iv) $y = -5$
   (v) $-x + 2y = 6$
   (vi) $3x + y = -9$
   (vii) $0 = 2 - y + 5x$
   (viii) $2x - 4y = 8$

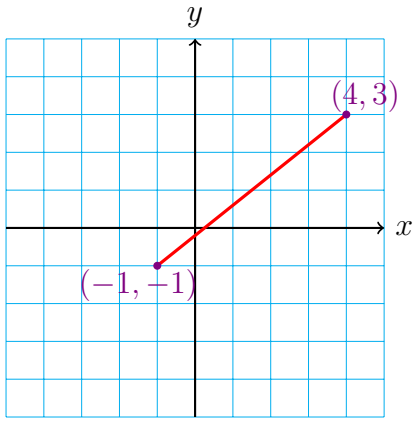
2. **Graph the following linear equations:**

   i. $y = 2x + 3$
   ii. $y = -\frac{1}{2}x + 1$
   iii. $y = 3x - 4$
   iv. $y = -x + 2$
   v. $y = \frac{1}{3}x - 1$
   vi. $y = -\frac{3}{4}x + 5$

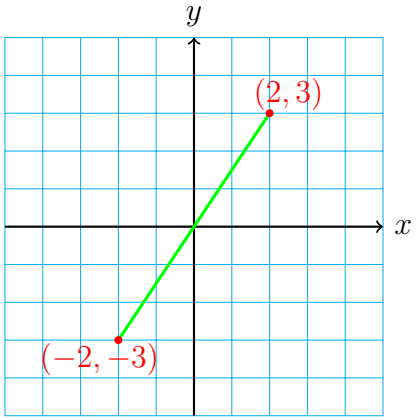
3. **Describe the slope of the line. Then find the slope.**



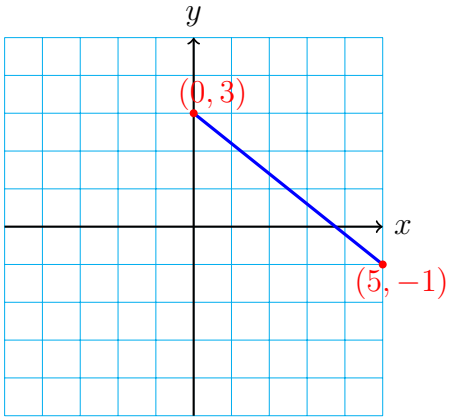
(i)



(ii)



(iii)



(iv)

4. **The points represented by the table lie on a line. Find the slope of the line.**

X	-9	-5	-1	3
Y	-2	0	2	4

X	-1	2	5	8
Y	-6	-6	-6	-6

X	0	0	0	0
Y	-4	0	4	8

Multiple Choice Questions

1. What is the slope of the equation $y = -\frac{2}{3}x + 5$?

   a. $-\frac{2}{3}$

b. $\frac{3}{2}$

c. -5

d. $\frac{5}{2}$

2. What is the y-intercept of the line $y = 4x - 6$?

   a. 4

   b. -4

   c. -6

   d. 6

3. What is the y-intercept of the line $y = 4x - 7$?

   a. 4

   b. -4

   c. -7

   d. 7

4. A line passes through $(2, 4)$ and $(4, 10)$. What is the equation of the line in slope-intercept form?

   a. $y = 3x - 2$

   b. $y = 3x + 4$

   c. $y = 2x - 2$

   d. $y = 2x + 4$