

DEPARTMENT OF MATHEMATICS and COMPUTER SCIENCE
BCC, CUNY

MATH 05 Test 2 Chapters 2 — 4 Review

1. Determine which of the ordered pairs are solutions for the given equation.

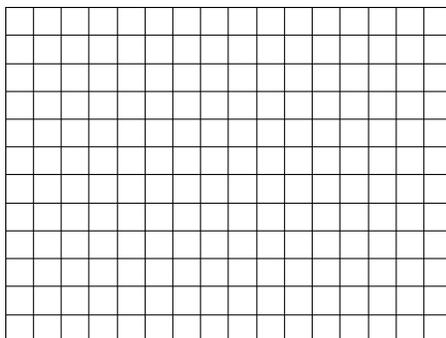
$2x - 3y = 6$ $(3, 0), (6, 2), (-3, 4), (0, 2)$

2. Determine which of the ordered pairs are solutions for the given equation.

$x - 4y = 6$ $(6, 0), (2, 2), (2, -2), (-2, -2)$

3. Plot points with the given coordinates (*use graph paper*).

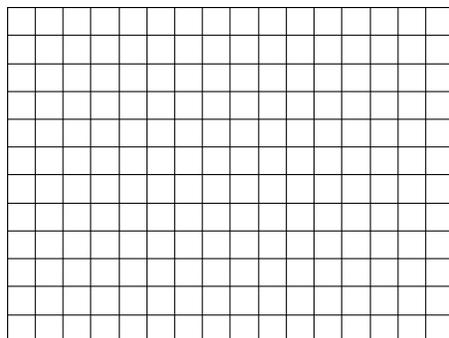
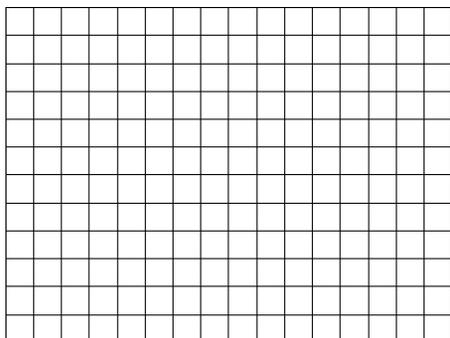
a) $(-2, -3)$ b) $(1, -4)$ c) $(2, 0)$ d) $(0, -4)$ e) $(-3, 2)$



4. Graph the equations:

a) $5x - 3y = 15$

b) $y = -3x + 7$



5. The slope of the line passing through the points $(-5, -2)$ and $(1, 2)$ is
 (a) $\frac{2}{3}$ (b) 0 (c) 1 (d) $\frac{4}{5}$
6. Find the slope of the line passing through the points $(2, -6)$ and $(-5, -2)$
7. Find the slope of the line passing through the points $(-3, -6)$ and $(5, -2)$
8. The slope of the straight line with equation $2x + 3y = 12$ is
 (a) $\frac{2}{3}$ (b) 2 (c) 1 (d) $-\frac{2}{3}$
9. For the following pair of lines find whether they are **parallel**, **perpendicular** or **neither** (choose the answer bellow)?
- (a) line L_1 through the points $(-3, -2)$ and $(1, 3)$;
 line L_2 through the points $(0, 3)$ and $(4, 8)$.
 (a) lines are parallel (b) lines are perpendicular (c) neither
- (b) L_1 with equation $5x - 7y = 18$;
 L_2 with equation $-14x + 10y = 13$
 (a) lines are parallel (b) lines are perpendicular (c) neither
10. Write an equation of the line passing through the point $(-\frac{5}{2}, -1)$, with slope m undefined.
11. Choose the equation of the line passing through the point $(-\frac{5}{2}, -1)$, with slope $m = 0$.
 (a) $y = -\frac{5}{2}$ (b) $x = -\frac{5}{2}$ (c) $y = x + \frac{3}{2}$ (d) $y = -1$
12. Write an equation of the line L in the standard form, satisfying the following conditions: L passes through the point $(-2, -4)$ and has the slope $m = -\frac{5}{2}$
13. Write an equation of the line L in the slope-intercept form, satisfying the following conditions: L passes through the point $(2, -1)$ and is parallel to the line with equation $3x - 2y = 6$

18. Solve the following system of equations.

$$\begin{cases} x - 3y = -8 \\ 2x + y = 5 \end{cases}$$

19. One number is 4 less than 3 times the other. If the sum of numbers is 36, what are the two numbers.

20. The length of a rectangle is 3 in. less than twice its width. If the perimeter of the rectangle is 84 in., find the dimensions of the rectangle.

21. Suppose 750 tickets were sold for a concert with a total revenue of \$ 5,300. If adult tickers were \$8 and students tickets were \$4.50, how many of each type of ticket were sold?