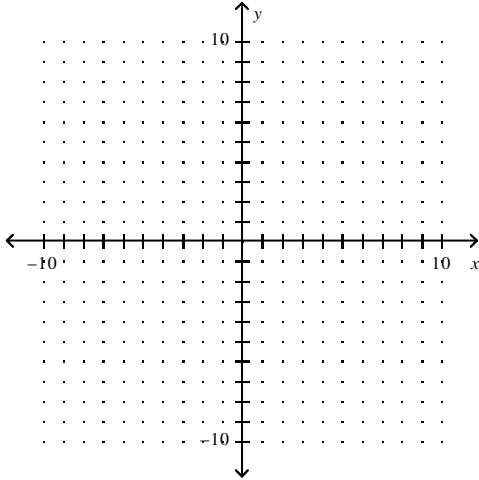


Chapter 2 – Practice Test

No calculator will be allowed on this portion of the test.

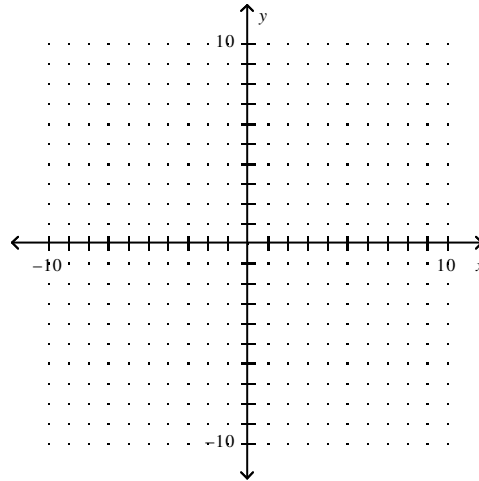
1. Graph the line: $y = -\frac{2}{3}x + 4$

Clearly plot at least 2 points that lie on the line.



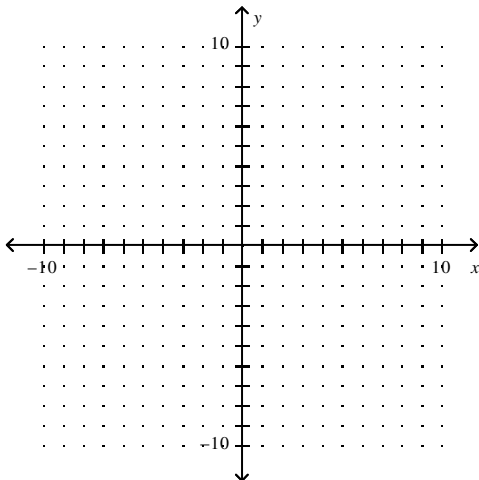
2. Graph the line: $-3x + 4y = 24$

Clearly plot at least 2 points that lie on the line.



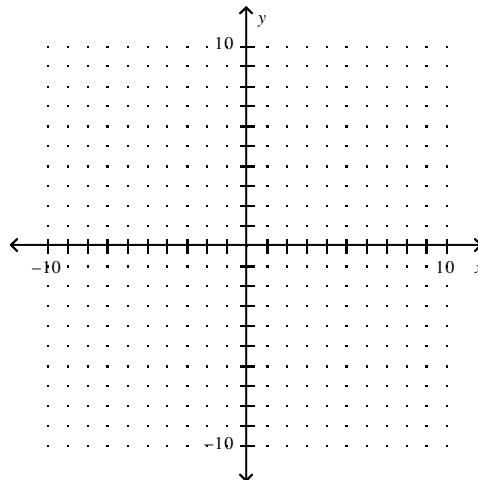
3. Graph the inequality: $y \geq -3x + 5$

Clearly plot at least 2 points that lie on the boundary line.

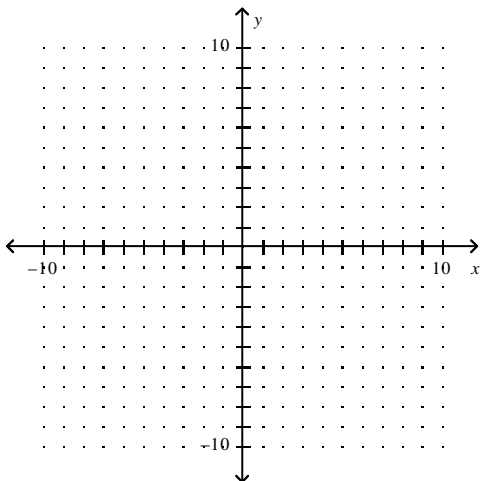


4. Graph the inequality: $2x - 3y < 18$

Clearly plot at least 2 points that lie on the boundary line.



5. Graph the parent graph $y = |x|$ and the graph of $y = -2|x - 3| + 4$. **Clearly** plot the vertex and at least two other points for each graph.



*You may use a calculator on the rest of this test.
Show your work on every problem!*

6. Find the slope of the line passing through the points $(-8, 8)$ and $(1, -2)$.

7. Write an equation of a line that has slope 8 and y-intercept -1.

8. Write the equation of the line, in slope-intercept form, that passes through the point $(-5, -6)$ and has slope 2.
9. Find the slope-intercept equation of the line passing through the points $(2, 1)$ and $(-43, 19)$.
10. Tell whether **Line 1** and **Line 2** are *parallel*, *perpendicular*, or *neither*. Explain/show work.
Line 1 passes through $(4, -6)$ and $(6, -2)$.
Line 2 passes through $(7, -8)$ and $(11, -6)$.
11. Determine whether the relation is a function. Explain why or why not.
 $(22, 14), (10, 14), (22, 15), (13, 16), (14, 16)$
12. Which equation has the steeper graph, $y = \frac{1}{5}x - 2$ or $y = \frac{3}{8}x + 3$? Explain.
13. Consider the equation $y = -5x + 5$.
a. Write an equation that passes through the point $(6, -1)$ and is parallel to the given equation.
b. Write an equation that passes through the point $(6, -1)$ and is perpendicular to the given equation.
14. Is the ordered pair $(5, -1)$ a solution of the inequality $3x - 4y \geq 20$? Explain.
15. The pet store has dog bones that sell for \$3.75 a pound and pig ears that sell for \$2.50 a pound. Write an equation that represents how much of each type of dog treat can be bought with \$42.
17. The value y of a copier x years after it was purchased can be modeled by the equation $y = 3000 - 500x$.
a. What is the slope of the line for this equation? Describe what the slope represents.
b. What is the y-intercept of the line for this equation? Describe what the y-intercept represents.
16. The amount of money in Amy's college fund can be modeled by the equation $y = 5000 + 1500x$ where $x =$ her age in years.
a. What is the slope of the line for this equation? Describe what the slope represents.
b. What is the y-intercept of the line for this equation? Describe what the y-intercept represents.
17. The table shows the population p (in millions) of Florida over a four year span.

Year	2000	2001	2002	2003
Population (in millions)	15.6	16.0	16.3	16.6

- a. Approximate the best-fitting line for the data.
- b. Using this model, what will be the population in 2010?