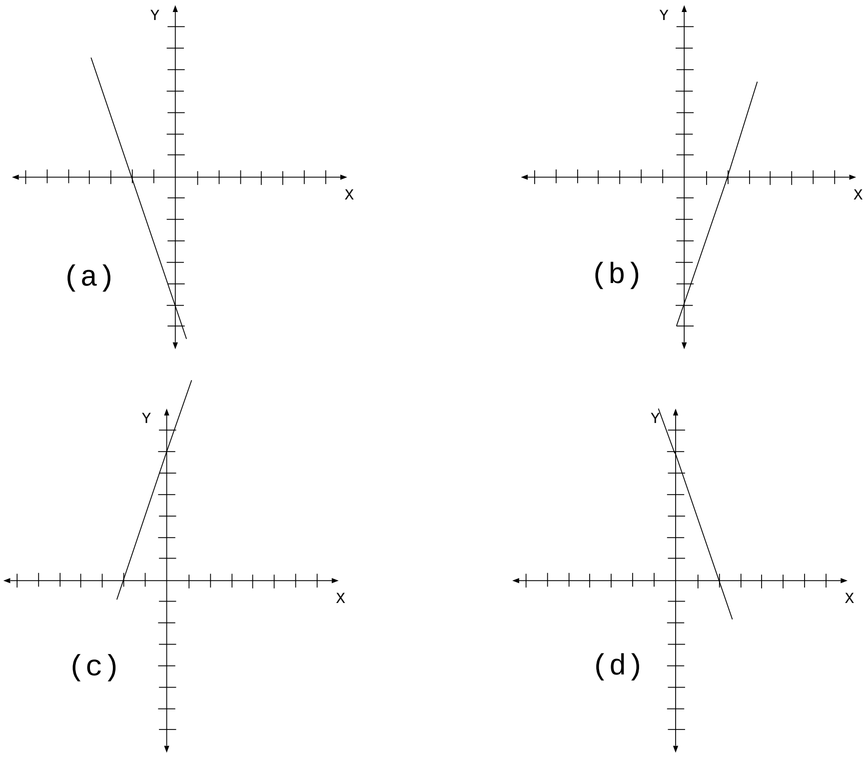
Math 042: Exam II **Date: April 02 , 2010**

Name: ________________________ **Section:** ____________

1. Which of the following is the graph of $-3x + y = -6$?



2. What is the slope of the line given by the equation $x = 5$?

(a) 1 (b) 0 (c) -5 (d) undefined

3. Find the slope and the equation of the line that contains the point $(-1, 3)$ and is **perpendicular** to the line $2x - y = 4$.

Slope: ______________________________ .

Equation: ______________________________ .

4. Find the equation of the line passing through $(-2, 5)$ and $(3, -3)$.

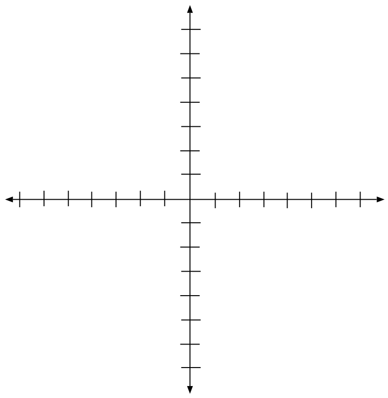
Equation: ____________________________ .

5. Solve the following system of equations.

$$\begin{aligned} 2x - y &= 1 \\ -3x + 2y &= 5 \end{aligned}$$

Your answer: ____________________________ .

6. Graph $3x + 2y < 6$.



7. Which of the following is an expansion of $(3x - 4y)^2$?

(a) $9x^2 + 16y^2$ (b) $9x^2 - 16y^2$ (c) $9x^2 - 24xy + 16y^2$ (d) $9x^2 - 12xy + 16y^2$

8. Expand $(x + 2)^3$.

Your answer: _________________________ .

9. $x - 49x^3 =$ __________________________ .

10. Factor $7x - 7y - bx + by$.

Your answer: ______________________________ .

11. Simplify $\frac{(2xy^{-3})^3}{2x^2y^{-2}}$.

Your answer: ______________________________ .

12. Factor $3x^2 + 4x - 15$.

Your answer: ______________________________ .

13. Solve $x^2 - 2x - 8 = 0$.

Your answer: ______________________________ .

14. Which one of the following is a factor of $8x^3 - 40x$?

(a) $8x^2$ (b) $x^2 - 5$ (c) $x - 5$ (d) $x^2 - 5x$

15. $(\frac{2}{3})^{-3} =$ ________________________.

(a) $-\frac{8}{27}$ (b) $\frac{8}{27}$ (c) $-\frac{27}{8}$ (d) $\frac{27}{8}$