**Test 2 MAT 191 Spring 2002 Name_____**

Simplify all answers and show your work!

1. Simplify: $\frac{x^{-4}y^{5}}{(x^{-2})^{3}}$

2. Simplify: $\frac{2(m^{-1})^{-4}}{9(m^{-3})^{2}}$

3. Multiply: $(x+3)(x^{2}+2x+4)$

4. Multiply: $(x+2)^{2}$

5. Divide. $\frac{x^{3}-6x^{2}-13x+20}{x-4}$

6. Plot the following points: (1, 3), (-2, 4), (5, 2)

7. Find the slope of the line through the points (2, -4) and (5, -1).

8. Graph the line 3x + 2y = 6

9. Divide: $\dfrac{14r^4 - 7r^3 + 28r^2}{-7r^3}$

10. Solve the determinant. $\begin{vmatrix} 2 & 4 \\ 3 & -2 \end{vmatrix}$

11. Find the equation of the line through the point (3, -2) with a slope $-\dfrac{5}{3}$.

12. Find the equation of the line through the point (1, 2) parallel to the line 2x + 7y = -5.

13. Solve the system of equations: $\begin{aligned} x - 3y &= 19 \\ 4x - 5y &= 41 \end{aligned}$

14. Use Cramer's Rule to solve for x in the following system of equations: $\begin{aligned} 6x + 3y &= -15 \\ 4x + 5y &= -1 \end{aligned}$

15. Find the slope of the line given by the equation 4x – 5y = 13.