# BRONX COMMUNITY COLLEGE 

of the City University of New York

## DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

MATH 05

Exam 2
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Name:

Directions: Write your answers in the provided space. To get full credit you must show all your work. Simplify your answers whenever possible. Be certain to indicate your final answer clearly. Each problem is worth 5 points

1. Evaluate: $\quad 7-5(6-8)-2^{4} \div 8 \cdot 2$.
2. Evaluate $-b^{2}-4 a$ if $a=-3$ and $b=-5$
3. Let $p(x)=x^{4}+x^{3}-7 x^{2}-x+6$. Find $p(-3)$.
4. Solve the equation: $2(x+5)=3(x+8)-6$
5. Solve the equation: $\frac{5 x+3}{9}-\frac{3-x}{3}=x-1$
6. Solve the inequality: $-5 x+2>11$. Graph the solution set and give your answer in interval notation.
7. Solve for $y: \quad 3 x-5 y=15$
8. Find the slope and the two intercepts of the line with equation $-7 x+3 y=-42$.
9. Sketch the graph of $4 x+3 y=12$. Show the $x$ and $y$ intercepts.

10. Find the equation of the line that passes through the points with coordinates $(-1,-7)$ and $(1,-1)$.
11. Find the equation of the line that is parallel to the line with equation $3 x-2 y=11$ and passes through the point with coordinates $(2,-5)$.
12. Find the point where the lines with equations $y=5 x-3$ and $2 x-4 y=48$ intersect.
13. Solve the following system: $\left\{\begin{aligned} 3 x-5 y & =13 \\ 4 x+2 y & =-26\end{aligned}\right.$
14. Solve the following system: $\quad\left\{\begin{aligned} 2 x+3 y & =-3 \\ 4 x+6 y & =-6\end{aligned}\right.$
15. Simplify: $\left(3 x^{4} y^{3} z^{5}\right)^{2}\left(-2 x^{3} y^{4} z^{2}\right)^{3}$
16. Simplify: $\quad\left(-3 x^{2}+4 x-7\right)-(8 x+3 x-2)$
17. Expand and simplify: $(2 x-5)\left(3 x^{2}-5 x+7\right)$
18. Expand and simplify: $(x-3)^{3}$
19. Simplify: $\frac{10 a^{5} b^{3}-4 a^{3} b^{2}+6 a^{4} b^{6}+8 a b^{2}}{2 a b^{2}}$
20. Simplify: $\frac{(2 x-3)^{2}+24 x}{(2 x+3)^{2}}$
