Review Algebra

MGF 1107, Algebra HW examples

1. Evaluate the algebraic expression for the given value of the variable:

a. $-x^2+7$ for $x=3$

b. $5x^2+18$ for $x=8$

2. Evaluate the given expression for $x=3$ and $y=2:$ $3x^2+2xy+5y^2$

3. Simplify the algebraic expression: a. $5(2x-1)$ b. $5(2y-9)-(8y+3)$

4. Solve the equation. Be sure to check your proposed solution by substituting it for the variable in the original equation.

a. $x-10=5$ b. $3(8x-2)=48$ c. $4x-1=19$ d. $4x=32$ e. $6x-(3x+12)=12$

f. $40(y+2)=5(7y+8)$ g. $\dfrac{32}{x}=\dfrac{8}{2}$

A. The solution set is { }

B. The solution set is $\{x|x$ is a real number$\}$

C. The solution set is the empty set: $\emptyset$.

5. Solve the following inequality and graph the solution set on a number line.

a. $x-5<2$ b. $-x<-2$ c. $12(x+1)-23<11x+1$

d. $-8\leq x-7<1$ e. $-37<12x-\leq -25$

For each item from a) thru e) What is the solution? $\{x|$ $\}$

6. Evaluate f(x) for the given values for x. Then use the ordered pairs $(x, \mathrm{f}(x))$ from the table to graph the function.

a. $f(x)=x^2-2$ b. $f(x)=x-2$ c. $f(x)=x^3+7$ Evaluate f(x) for $x=-2,\ -1,\ 0,\ 1,\ 2$

7. Use the following function $f(x)=x-9$ to find $f(11)$ and $f(3)$.

8. Evaluate the function at the given value of the variable.

$f(x)=4x^2+3x+4$ a) $f(3)$ b)$f(-4)$

9. Graph the linear equation: $y=2x+6$

10. Graph the linear function using the slope and y intercept. $f(x)=\dfrac{5}{6}x-1$

11. Rewrite $-7x+y=0$ in slope intercept form.

a. Give the slope and y-intercept.

b. Graph the equation.

12. Given $5x+7y=35$

a. Put the equation in slope intercept form.

b. Identify the slope and the y-intercept.

c. Use the slope and y intercept to graph the line.

13. Graph the following equation in a rectangular coordinate system.

a. $y=5$ b. $x=2$