

# Algebra 3 Assignment # 1

Solve for x in the following equations:

(1)  $|x-3|=10$

(2)  $|2x-8|=22$

(3)  $|4(x+7)-2|=20$

(4)  $|x-3|=10$

(5)  $|x-6|<10$

(6)  $|2x+6|\geq 12$

(7)  $2|x+3|>22$

(8)  $2-5|x-3|<-23$

(9)  $10-2|2(x-8)|>110$

(10)  $|x+6|=3x-1$

(11)  $|2x-1|\leq 5-x$

(12)  $|x-8|\leq 10-3x$

## Answers:

1.  $x=13$  or  $x=-7$

2.  $x=15$  or  $x=-7$

3.  $x=-1\frac{1}{2}$  or  $x=-12\frac{1}{2}$

4.  $x=13$  or  $x=-7$

5.  $-4<x<16$

6.  $x\geq 3$  or  $x\leq -9$

7.  $x>8$  or  $x<-14$

8.  $x>8$  or  $x<-2$

9. NS

10.  $x=3\frac{1}{2}$

11.  $-4\leq x\leq 2$

12.  $x\leq 1$