**Relations & Functions Handout**

**For Questions 1 - 4, give the domain and range. Make a mapping diagram for each relation. Determine if each relation is a function. If it is not a function, explain why.**

1. (2, 4) (4, 6) (6, 8) (3, 4) (5, 7) (8, 2)
2. (-1, 6) (0, 4) (-4, 0) (-1, -6) (-3, -8)
3. (Jim, Kitty) (Joe, Betty) (Brian, Alice) (Jesus, Anissa) (Ken, Kelli)
4. (Jim, Alice) (Joe, Alice) (Brian, Betty) (Jim, Kitty) (Ken, Anissa)

**For Questions 5 - 6, give the domain and range. Write each as a set of ordered pairs. Determine if each relation is a function. If it is not a function, explain why.**

1. 
2. 

**For Questions 7 - 9, give the domain and range. Determine if each relation is a function. If it is not a function, explain why.**

1. 
2. 
3. 
4. At a Prom dance, each boy pins a corsage on his date. Is this an example of a function?
5. Later, at the same dance, Cory shows up with two dates, does this change the answer?

For each function, evaluate *f*(0),*f*(12),and *f*(5)

1. *f*(*x*)=2*x*+1
2. *f*(*x*)=−2*x*+1
3. *f*(*x*)=−2*x*2+3
4. *f*(*x*)=5*x*2−2*x*+1