Functions

$f(x)=3x^2-2x+5$ Find $f(3)$

f(3)=3x^2-2x+5

- 9^2-6+5
- 81-6+5

= 80

Rearranging – find *x* in each case

1. **x+10/2x+3 = 2**

- **X+10 = 2 x 2x+3**
- **X+10 = 4x+3**
- **10-3=3x**
- **X=7/3 or X=2.33**

2. $x^3+x^2-6x=0$

- x(x-2)(x+3)=0
- x=0, x=2, x=-3

Order of opperations

1. Evaluate $3*4-(5*2)/(6+4/2)$

- 12 – (10)/(10/2)
- 12 – 10/5

Composite Functions and Inverses

1. $f(x)=x^2+3$ Find $f(1)$ and $f(2)$.

- f(1)=1^2+3
- f(1)=4
- f(2)=2^2+3
- f(2)=7

2. $f(x)=x^2+3$ and $g(t)=3\sin(t)$ Find $f(g(t))$ and $g(f(x))$

- f(3sin(t))
- f(g(t)= (3x^2sin(t))+3
- g(x^2+3)
- g(f(x)= sin(x^2+3)

3. 3. $f(t)=t^3-3$ and $g(t)=3e^t$ Find $f(g(t))$ and $g(f(t))$

- f(3e^t)
- f(g(t) 3e^3-3
- g(t^3-3)
- g(f(t) = 3e(t^3-3)

4. Find the inverse of $f(x)=3x+4$. Show all steps.

- x= 3y+4
- 3y = x – 4
- y = x – 4 / 3

5. Find the inverse of $f(z)$ = 3z – 5 / 6 . Show all steps.

- X = 3z-5 / 6
- X x 6 = 3z – 5
- 6x + 5 / 3 = z

Sets and Logic

1. Consider the sets A = {7, 8, 9, p, g} and B={5, 8, 12, 7, g} within the universe {c, 5, 6, 7, 8, 9, 12, 13, q , g, p}

   Find $A \cup B$ and $A \cap B$

   Find $\_A$ and $\_B$

   AuB = 5, 7, 8, 9, 12, p, g)

   AnB = 7, 8, g

   _A = 5, 12

   _B = 7, 9, p

2. Union is related to the logic function true/and? (elements of the sets that belong to the sets)
3. Intersections in logic functions is the operations on sets