**Conics Review (Day 2)**

1. Find the equation of the circle centered at (-2, 3) and has a radius of 6.
2. Find the equation of the circle with diameter end points (1, 5) and (-10, 9).
3. Write the equation of the circle centered at (1,1) with endpoint (5, 6)
4. Determine the standard form of the equation:
4*x*2 – 8*y*2 + 8*x* – 48*y* – 100 = 0.
5. Determine the type of conic section and find the center:
2*x*2 + 4*y*2 + 8*x* – 48*y* – 100 = 0.
6. Write an equation in standard form for the hyperbola with center (0, 0),

vertex (0, 3) and focus (0, 7).

1. Write an equation in standard form for the ellipse with center (0,0), vertex (-6, 0) and co-vertex (0, 7).

**Let** $f\left(x\right)=3x+4$ **and** $g\left(x\right)=x-8$**.**

1. Find $\left(f+g\right)\left(x\right).$
2. Find $\left(f-g\right)\left(x\right).$
3. Find $\left(fg\right)\left(x\right).$
4. Find $\left(\frac{f}{g}\right)(x)$. State the domain.
5. Find $\left(\frac{g}{f}\right)(x)$. State the domain.

**Let** $f\left(x\right)=x^{2}$**,** $g\left(x\right)=2x-4$**, and** $h\left(x\right)=5x.$

1. Find $\left(f+g\right)\left(x\right).$
2. Find $\left(f-h\right)\left(x\right).$
3. Find $\left(fg\right)\left(x\right).$
4. Find $\left(gh\right)\left(x\right).$
5. Find $\left(\frac{f}{h}\right)(x)$. State the domain.
6. Find $\left(\frac{g}{f}\right)(x)$. State the domain.
7. Find $\left(f+g+h\right)\left(x\right).$