Extra Practice Worksheet 4.3

Name _____

1. Write the equation of a circle in standard form with center at (-16, 5) and passing through the point (-9, -3).

2. Write the equation of the ellipse in standard form with vertices at (-7, 2) and (5, 2) and minor axis length of 8.

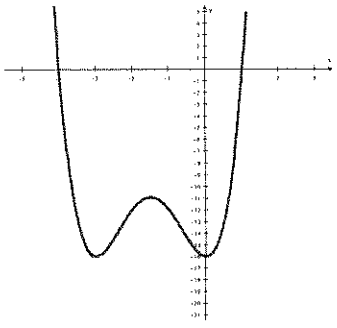
3. Write the equation of the hyperbola in standard form with foci at (-3, 12) and (-3, 0) and conjugate axis endpoints at (-8, 6) and (2, 6).

4. $f(x) = x - 4$ $g(x) = 2x^2 + 5$

Find $g(f(x))$.

5. Find all real and non-real zeroes.

$f(x) = x^4 + 6x^3 + 9x^2 - 16$



Extra Practice 4.3

~~Worksheet 8.4~~

Name _____

1. Write the equation of a circle in standard form with center at (-16, 5) and passing through the point (-9, -3).

$(x+16)^2+(y-5)^2=113$

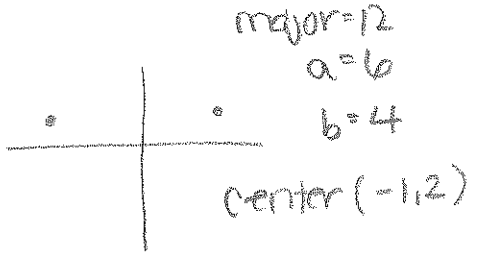
$r=\sqrt{(-16+9)^2+(5+3)^2}$

$r=\sqrt{49+64}$

$r=\sqrt{113}$

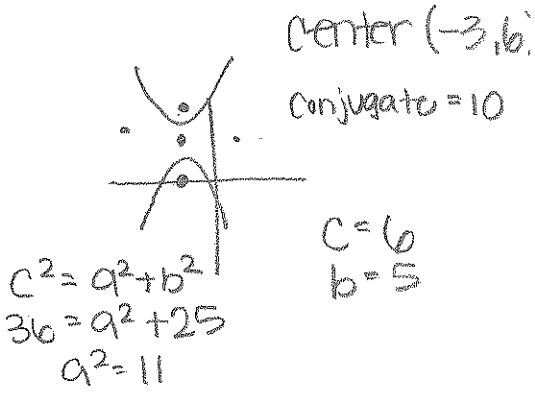
2. Write the equation of the ellipse in standard form with vertices at (-7, 2) and (5, 2) and minor axis length of 8.

$\frac{(x+1)^2}{36}+\frac{(y-2)^2}{16}=1$



3. Write the equation of the hyperbola in standard form with foci at (-3, 12) and (-3, 0) and conjugate axis endpoints at (-8, 6) and (2, 6).

$\frac{(y-6)^2}{11}-\frac{(x+3)^2}{25}=1$



4. $f(x)=x-4$ $\quad g(x)=2x^2+5$

Find $g(f(x))$.

$g(f(x))=2(x-4)^2+5$

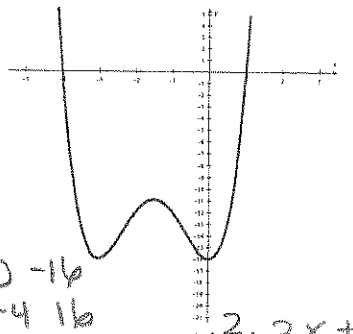
$=2(x^2-8x+16)+5$

$=2x^2-16x+32+5$

$g(f(x))=2x^2-16x+37$

5. Find all real and non-real zeroes.

$f(x)=x^4+6x^3+9x^2-16$



-4 | 1 6 9 0 -16
-4 -8 -4 16
1 | 1 2 1 -4 0
1 3 4
1 3 4 0

$x^2+3x+4=0$

$a=1$, $b=3$, $c=4$

$x=\frac{-3\pm\sqrt{9-4(1)(4}}{2}$

$x=\frac{-3}{2}\pm\frac{\sqrt{-7}}{2}$

$x=-\frac{3}{2}\pm\frac{\sqrt{7}}{2}i$

Zeroes:
$-4, 1, -\frac{3}{2}\pm\frac{\sqrt{7}}{2}i$