**GEOMETRY**

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| 1. Find the center and radius of the circle with equation $x^{2}+ y^{2}-6x+10y+9=0$
 | 1. Evaluate the piecewise function at the given values of the independent variable:

$$f\left(x\right)=\left\{\begin{array}{c}\frac{x^{2}-9}{3} x\ne 3\\6 x=3\end{array}\right.$$Evaluate at f(5), f(0), and f(3). |
| 1. Let $A( -7, 4)$ and $B(5, -12)$ be points in the plane. Find the equation of the line through points A and B.
 | 1. Find the domain of the piecewise function:

$$f\left(x\right)=\left\{\begin{array}{c}0 x<-4\\x^{2} x\geq 0\\-x -4\leq x<0\end{array}\right.$$ |
| 1. Sketch the region in the $xy$-plane defined by $\left| x \right|< 4 and \left| y \right|<2$
 | 1. Find the domain of $g\left(x\right)=\frac{\sqrt{x-2}}{x-5}$
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| 1. Identifying even and odd functions:
	1. $f\left(x\right)=x^{3}-6x $
	2. $g\left(x\right)=x^{4}-2x^{2}$
	3. $h\left(x\right)=x^{2}+2x+1$
 | 1. Find an equation for the line that passes through the point (2, -5) and
	1. has a slope of -3
	2. is parallel to the y-axis
	3. is parallel to the line 2x-4y=3
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**Circles**

1. Find the equation of the circle with its center at (1, -5) and radius of 3.
2. Given the equation of a circle $(x-3)^{2}+(y+4)^{2}=3$, find the radius and the center.
3. Give the center and radius of the circle defined by $x^{2}+(y-3)^{2}=9$.
4. Give the center and radius of the circle defined by $3x^{2}+3y^{2}=9$.
5. Find the equation of the circle with center at (-6, -7) and r = 6.

**Parallel/Perpendicular**

1. Find the equation of the line containing (3, 0) and perpendicular to the x-axis.
2. Find the equation of the line containing (-4, 5) and parallel to the x-axis.
3. Find the equation of the line containing (0, -2) and parallel to the x-axis.
4. Fund the equation of the line containing (-4, 5) and parallel to the y-axis.
5. Find the equation of the line that is parallel to the graph of y = 3x – 2 and has the y-intercept (0, 3).
6. Find the equation of the line that is perpendicular to the graph of y = 5 and has the y-intercept (2, 0).
7. Find the equation of the line that is perpendicular to the graph of x = -2 and passes through the origin.