Geometry   Name _____
Locus of Points   Date _____ Period _____

Describe the locus of points that satisfy each set of conditions. Describe algebraically with an equation those that are starred. (Some may not have meaning is all three settings.)

Condition	1 Dimension (on a Line) Draw the figure.	2 Dimensions (on a Plane) Draw the figure.	3 Dimensions (Space) Be prepared to model it.
1. 4 units from the origin*			
2. Equidistant from two points P and Q*	P(-3) and Q(6)	P(-3,0) and Q(6,0)	P(-3,0,0) and Q(6,0,0)
3. 3 units away from x = 2*			
4. Equidistant from x = 8 and x = -2*			
5. Equidistant from y = -5 and y = 4*			

6. Equidistant from $x = 3$ and $y = -2$*			
7. $x^2 + y^2 = 25$			
8. 2 units from $x^2 + y^2 = 25$			
9. 6 units from $x^2 + y^2 = 25$			
10. 4 units from $(x - 2)^2 + (y + 4)^2 = 25$			
11. equidistant from $x^2 + y^2 = 16$ and $x^2 + y^2 = 64$			
12. 5 units from the y-axis			