I will try to write things down.

Please just ask me to slow down or repeat.

- Will try to upload my whiteboards.
- will also upload handouts.

Office hours:

4-5pm on Tuesdays,

1-2pm on Wednesdays

(same Zoom as before)

email me first

PMA 9.116 when we're in person.

Biweekly quizzes (NOT impacting your grade)

(every 2 weeks)

Thursdays, starting next week (1/27).

Write an equation describing the set of points on a circle of radius 5 centered at the point $(1, -6)$.

$$(x-1)^2 + (y+6)^2 = 25$$

Given two points x_1, y_1 and x_2, y_2 in the plane, distance between them is

$$\sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Set of points $(x,y) \in \mathbb{R}^2$ satisfying

distance from (x,y) to $(1,-6)$ is 5

[circle is set of points equidistant from a fixed point in $\mathbb{R}^2$]

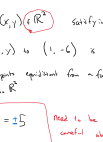
$$\sqrt{(x-1)^2 + (y+6)^2} = 5$$

Need to be careful about taking these steps because not equivalent!

$$(x-1)^2 + (y+6)^2 = 25$$

equation of circle:

$$x^2 + y^2 = 1$$



Solve this equation for y:

$$y^2 = 1 - x^2$$

$$y = \sqrt{1 - x^2}$$

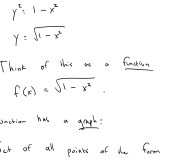
Think of this as a function

$$f(x) = \sqrt{1 - x^2}$$

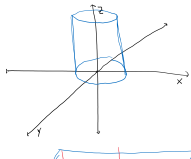
Function has a graph:

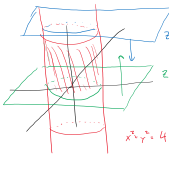
Set of all points of the form

$(x, f(x))$, where x is in domain of f.



Write down a set of equations (and inequalities) describing the set of points on the surface of a cylinder w/ radius 2 and height 4, w/ base on the x-y plane, circle centered at origin.





x, y, z coordinates

Write down a set of inequalities describing the set of points in the interior of this triangle: