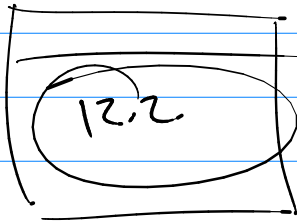


# Math 243

Syllabus

hours to study

do everything  
up to 12.1  
rew 12.2  
try examples



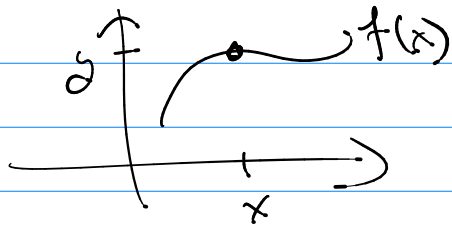
do everything  
up to 12.2

Calc 2

Ch 12?

Math(s) = tricks (+) rules

Calc tricks: functions scalar  $\rightarrow$  scalar



$$f(x) = x^2 + 7$$

$$x + 3 = 4$$

$$x + \underline{3 + (-3)} = 4 + (-3)$$

$$x + 0 = 1$$

$$x = 1$$

Scalars:

ex

3° F

Vectors  
and 3D  
space

ex



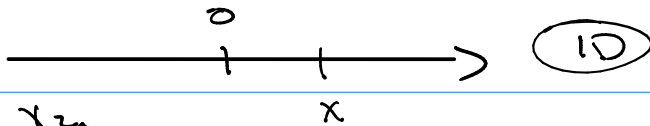
2D

3D

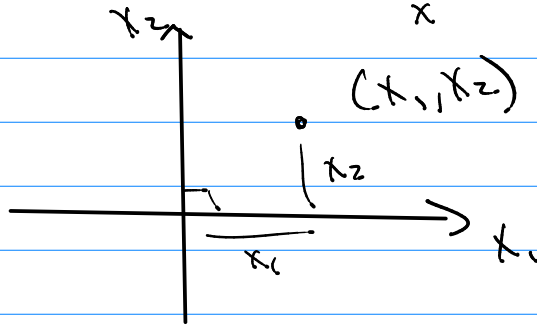
$\rightarrow$  ? D

New tricks

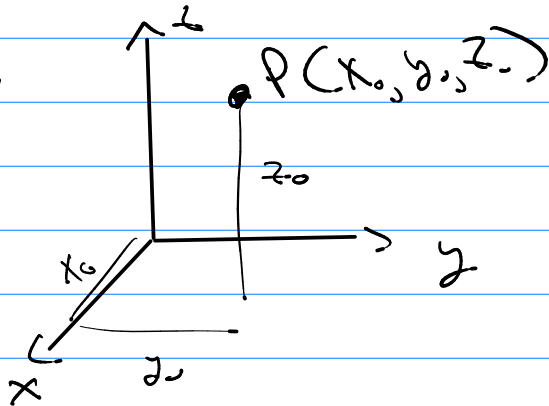
3D space



2D

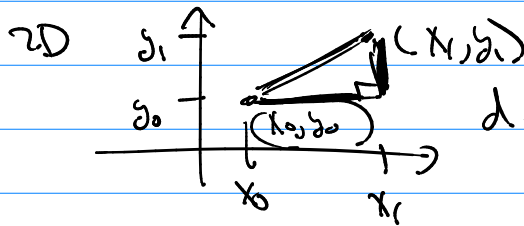


3D



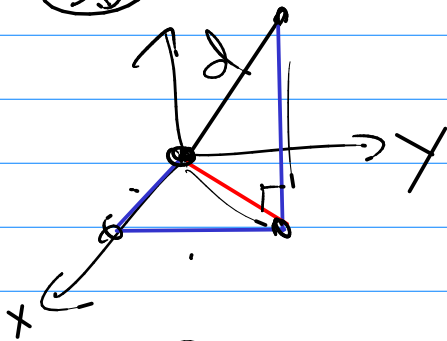
location

Distance:



$$d = \sqrt{(x_1 - x_0)^2 + (y_1 - y_0)^2}$$

3D



$$d = \sqrt{(x_1 - x_0)^2 + (y_1 - y_0)^2 + (z_1 - z_0)^2}$$

1D

$$d = \sqrt{(x_1 - x_0)^2} = |x_1 - x_0|$$

$$x^2 - 4 = 0 \rightarrow (x+2)(x-2) = 0$$

$$x^2 = 4$$

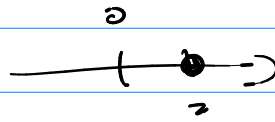
$$x = \pm\sqrt{4} = \pm 2$$

Solutions to Equations → expression  $\hat{=}$  expression

1D

1D

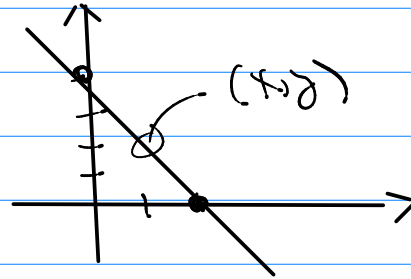
$$x = 2$$



2

2D

$$2x + y = 4$$



3D

$$2x + y = 4$$

