#flo #disorganized #inclass

1 | chapter :clap: review   **clap**

KBxGroupAndMatricesIntro

```
field: group with + and *
eg. complex #, real #
F: field -- usually real and/or complex
```

don't need to worry about distributivity!

we are gonna use a lotta fields and not a lot of groups

figure it out in low d then just aplly to high d

addition -> commutative in f1, extrapolate to fn

```
inhereted comutitivity!
```

3d vis on 2d means losing info, thus point has a line of points that all fall there

additive and multiplicative identity need to be separate!

any group with zero will not be groups under *! Q*=(Q\0}, *) pluck out zero

1.0.1 |associativity check, with integers!

let $a, b, c \in Z$

goal: $a + (b + c) = (a + b) + c$

$a + (b + c) = (1 + 1 + 1 + 1 + ... + 1) = (1 + 1 + 1 + 1 + ... + 1) + (1 + 1 + 1 + 1 + ... + 1) + (1 + 1 + 1 + 1 + ... + 1)$

and then scoot over?

#review

1.0.2 |* 3x1 matrices

- equal indicies

no * everything by 1 cus ai !+ ia :(

dot and cross product