

Tuesday, January 17

Follow the separate general guidelines for Parts A,B,C. Be sure to include and label *all four* standard parts (a), (b), (c), (d) of Part A in what you hand in.

\mathbf{R}^n and \mathbf{C}^n
Section 1.A

A: Reading questions. Due at the beginning of class on Thu., 19 Jan., but preferably by 2pm, Wed., 18 Jan.

1. Verify, using properties of real numbers, and that $(-i)^2 = -1$, that complex numbers satisfy the distributive property.
2. What does \mathbf{F} stand for?
3. What two things does 0 stand for? Why do we use this same symbol for both of these things?
4. The picture for addition in \mathbf{F}^n on p. 9 is 2-dimensional ($n = 2$), since it is drawn on a 2-dimensional piece of paper. Does this picture work for larger values of n ? Why or why not?
5. What gets multiplied in scalar multiplication?

B: Warmup exercises. For you to present in class. Due by the end of class Thu., 19 Jan.

Exercises 1.A: 2, 10, 15