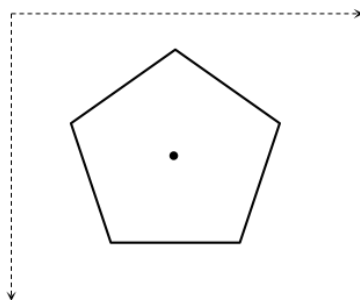
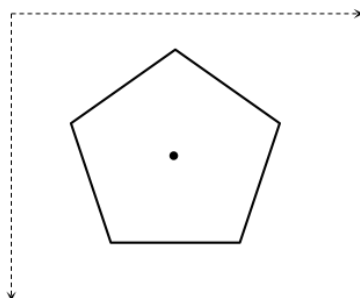


Flood Fill

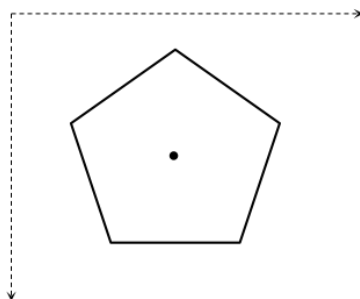
1. In the flood fill algorithm, if there is just one recursive call (to the **north**), what area is filled in the pentagon below? For all questions, assume the first flood fill call is to the marked center pixel.



2. Answer the same question as above, but for two recursive calls (to the **north** and **east**). Shade the filled area in the pentagon below.



3. Now assume we have three recursive calls (to the **north**, **east**, and **south**). Shade the filled area in the pentagon below.



4. If we wanted to avoid stack overflow problems, what modifications to flood fill could we make to reduce the number of recursive calls? Would we have to make multiple *initial* calls to flood fill?