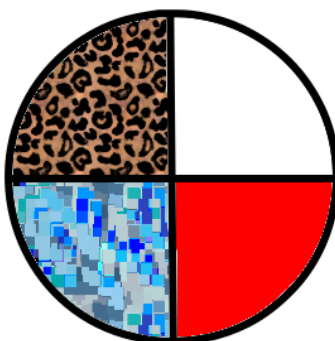


## Homework 5 extra problems

This is a cake with four parts.



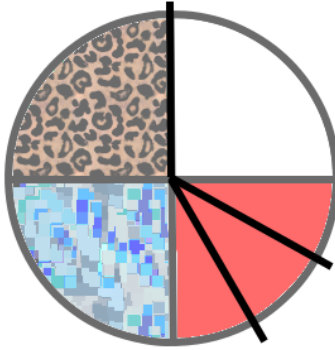
**Question 1.** Let's say 3 people ( $A, B, C$ ) are dividing the cake using the lone divider method.

- $A$  likes the leopard print and the blue bitties pattern.
- $B$  likes everything equally
- $C$  likes only the red part

Please show how they might divide the cake if  $A$  divides first. You may have to draw more than one picture to show the sequence of moves that happen.

**Question 2.** In the same scenario as before, say that  $C$  is the divider, and

divides the cake like this:



Please show how the division would proceed from there using the lone divider method.

**Question 3.** With the same picture and description as above, let's introduce 3 more people:

- $D$  likes only the white part
- $E$  likes only the red and white parts
- $F$  likes everything except the blue bitties pattern

Please describe how  $A, B, C, D, E,$  and  $F$  would divide the cake using the lone divider method. Make your initial cuts so that there are at least 2 rounds.