MINI-HW 1
MATH 312, SPRING 2023

YOUR NAME

1.1.1 Complete the multiplication table for D_8 below. (Use & symbol to separate entries in the table.)

	R_0	R_{90}	R_{180}	R_{270}	H	V	D	D'
R_0	R_0							
R_{90}	R_{90}	R_{180}			D'		H	
R_{180}	R_{180}	R_{270}			V			
R_{270}								
H		D						
V								
D								
D'								

1.1.5 (a) Find the center of D_8. Type your answer here.
      (b) Find $\mathbb{C}_{D_8}(R_{90})$ and $\mathbb{C}_{D_8}(H)$. Type your answer here.

1.1.6 Complete the multiplication table for D_6 below. Fill in the table the same way you did in 1.1.1.

	R_0	R_{120}	R_{240}	V	D	D'
R_0	R_0					
R_{120}	R_{120}	R_{240}				
R_{240}	R_{240}	R_0				
V						
D						
D'						

REFERENCES

[1] If you used any written sources (including electronic) other than our text, list them here.
[2] List human sources here.
[3] Algebra in Action: A Course on Groups, Rings, and Fields, American Mathematical Socitey, 2017.