Problem 3 Continued

The code was made with several functions in matlab. The pseudo code is depicted below, highlighting program outline, inputs and outputs. Blue boxes depict programs, while red boxes coupled with arrows depict data flow.

Geometry Information

Number of angular subdivisions

Stopping mean free path

Location (outside fuel, inside lattice)

Problem (Square = 1 ; Hex = 2)

**Distances.m**

Determines distance traveled in moderator and in fuel each time the lattice is crossed.

Everything Under the Sun

**Right\_Direction**

Determines if points of intersection are valid. This uses the limits of the lines (determined while plotting), and normal vectors.

Geometry information

Intersection information

**Reflection.m**

Handles reflection across lattice

Using normal unit vectors.

Also used to determine if points of contact are in a valid direction

**Loop\_Check.m**

Loops Over Angles and calls Problem\_3.m

Angle

Location

Problem

mfp

**Problem\_3.m**

Input Setup (Geometry)

Plotting Lattice

Reflections →

Determine points of intersection

Determine Correct Intersection →

Calculate Distances →

Plot traces of line of travel

Calculate Flux