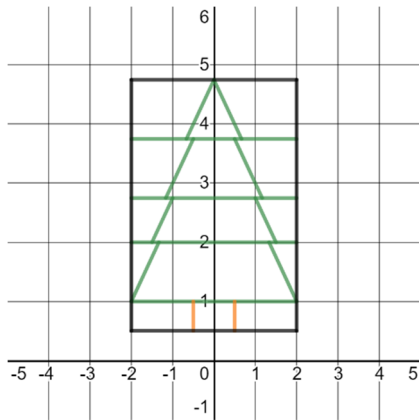Name: _____   Due: _____

For this chapter, we will be creating a stained-glass window in Desmos. There are three tiers to the project – you choose your maximum mark:
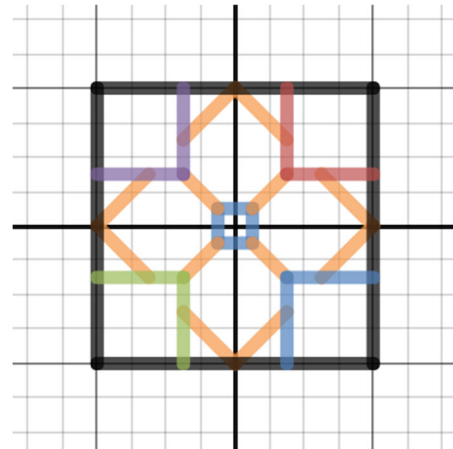
Tier 1	**Tier 2**
• For **a maximum** of 65%, you can fill in a minimum of 5 sections of this tree picture:	• For a **maximum** of 75%, you can fill in a minimum of 8 sections of this flower picture:

Tier 3
- For a **maximum** of 100%, you can draw your own picture of your choosing (similar in difficulty to the flower) and fill in a minimum of 10 sections of it. The picture must be your own work.

When working in Desmos, in order to colour a shape in the restrictions will all be in the same line:

$$y \leq x + 4 \ \{0 \leq y \leq 1.5\} \ \{x \leq -0.5\} \ \{y \leq -x\}$$

$y = x + 4$	$\{0 \leq y \leq 1.5\}$	$\{x = -0.5\}$	$\{y = -x\}$
(want $(0,0)$ to be true)	(clips line – already there)	(want $(0,0)$ to be false)	(can't use $(0,0)$ because it's on the line)
$0 = 0 + 4$		$0 = -0.5$	(want $(1,1)$ to be false)
$y \leq x + 4$		$x \leq -0.5$	$1 = -1$
			$y \leq -x$
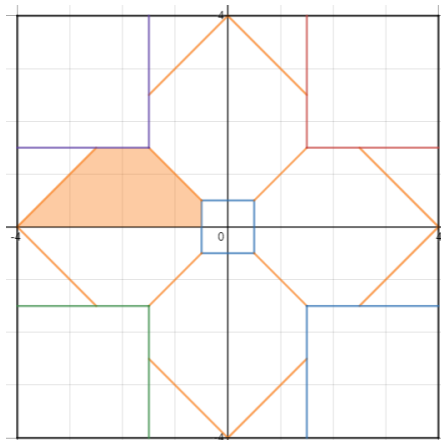
Criteria	😱	😐	😊	😁
Tier 1 – The Christmas Tree				
Number of sections coloured.	0-2	3-4	5	6+
Changed the equations in the tree into inequalities.				
Colouring follows the given lines.				
Show your work for at least 2 inequalities.	0	1	2	3+
Tier 2 – The Flower				
Number of sections coloured.	0-2	3-5	6-8	9+
Changed the equations in the flower into inequalities.				
Colouring follows the given lines.				
Show your work for at least 3 inequalities.	0-1	2	3	4+
Tier 3 – Your Original Work				
System is made only of linear equations.				
Sections coloured	0-4	5-7	8-9	10+
Picture is original.				
Colouring follows the lines that are in keeping with the picture.				
Show your work for at least 4 inequalities.	0-1	2-3	4	5+