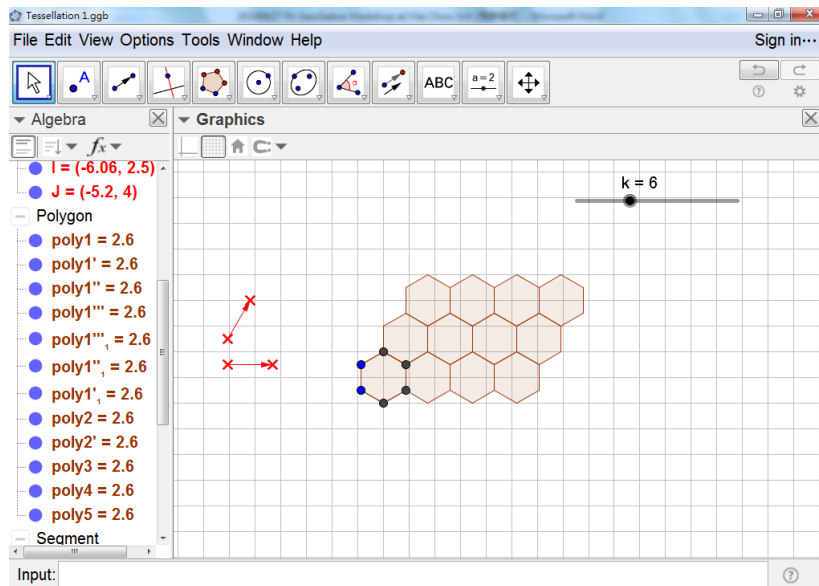






## MATP 1331: GeoGebra 幾何創作室

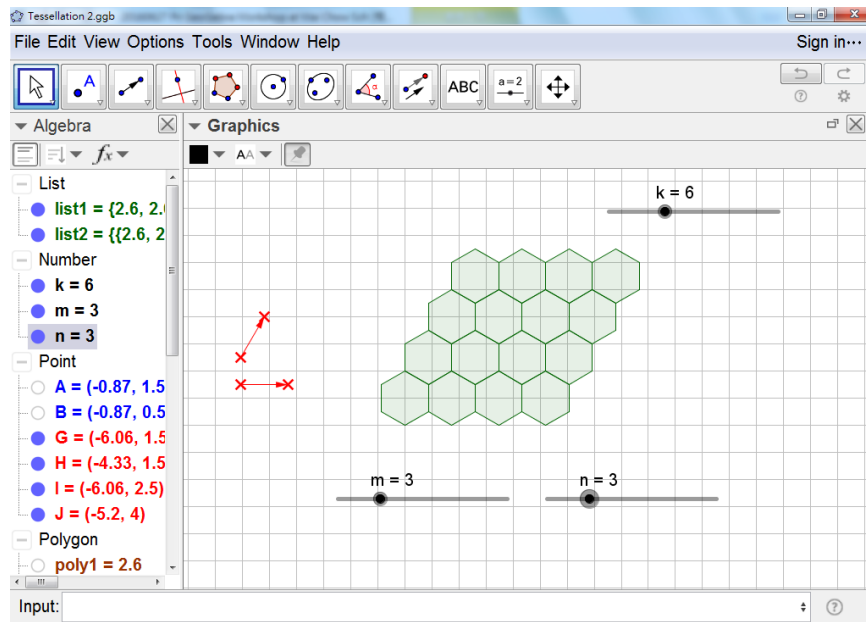
### Creative Geometry with GeoGebra


#### 密鋪 Tessellation



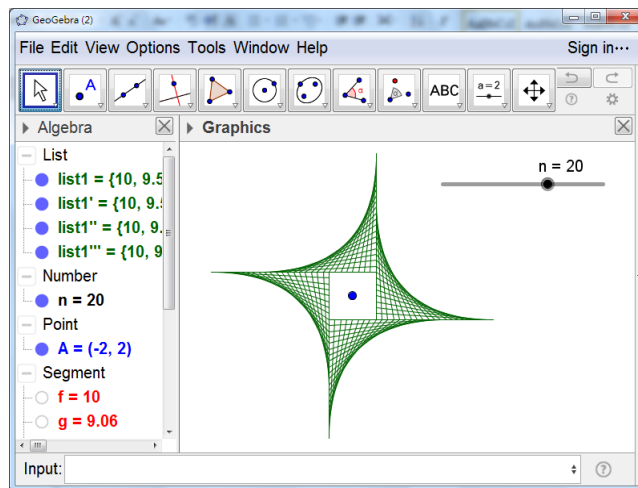
No.	Object/Effect	Tool /Action	Remarks
0.	No labelling	Options   Labelling   No New Objects	
1.	Slider k		Integer value from 3 to 12
2.	Regular k-gon poly1		
3.	Vectors u and v		Red Point style "x"
4.	Translate poly1 by u and v into four rows and three columns		
5.		Drag the vector points to investigate how regular polygons tessellate the plane.	




## 以指令密鋪正多邊形 Tessellating Regular Polygons using Commands



No.	Object/Effect	Command/Action	Remarks
0.		Hide the polygons and points in Task 1.	
1.	List list1	Sequence[Translate[poly1, i u], i, 0, 3]	
2.	List list2	Sequence[Translate[list1, j v], j, 1, 3]	
3.	Slider m and n		Integer value from 1 to 9
4.	List list1	Redefine it to: Sequence[Translate[poly1, i u], i, 0, m]	
5.	List list2	Redefine it to: Sequence[Translate[list1, j v], j, 1, n]	
6.		Drag sliders m and n to control the number of polygons in each row and the number of rows	

# 繡曲線 Curve Stitching



No.	Object/Effect	Command/Action	Remarks
0.		A new window.	
1	Segments f to q	Enter the following 11 commands in the input bar: Segment[(0,10), (0,0)]      Segment[(0,9), (1,0)] Segment[(0,8), (2,0)]      Segment[(0, 7), (3, 0)] Segment[(0, 6), (4, 0)]      Segment[(0, 5), (5, 0)] Segment[(0, 4), (6, 0)]      Segment[(0, 3), (7, 0)] Segment[(0, 2), (8, 0)]      Segment[(0, 1), (9, 0)] Segment[(0, 0), (10, 0)]	Red
2		Observe the pattern. Hide the segments.	
3	List L_1	Sequence[Segment[(i, 0), (0, 10 - i)], i, 0, 10]	
4	Slider n		Integer value from 1 to 30
5	List L_1	Redefine it to: Sequence[Segment[(i 10 / n, 0), (0, 10 - i 10 / n)], i, 0, n]	
6	Point A		Hide its label. Drag it to the origin.
7	List L_1', L_1'' and L_1'''	 Rotate list1, list1' and list1'' respectively by 90° anticlockwise.	Hide the grid and axes. Drag A to various positions and see the effect.