Supplemental material: Visual Algebra (Math 4120), HW 1

#**1(f)**: Cayley table for the group **Sq** of symmetries of the square.

	1	r	r^2	r^3	f	rf	r^2f	r^3f
1								
r								
r^2								
r^3								
f								
rf								
r^2f								
r^3f								

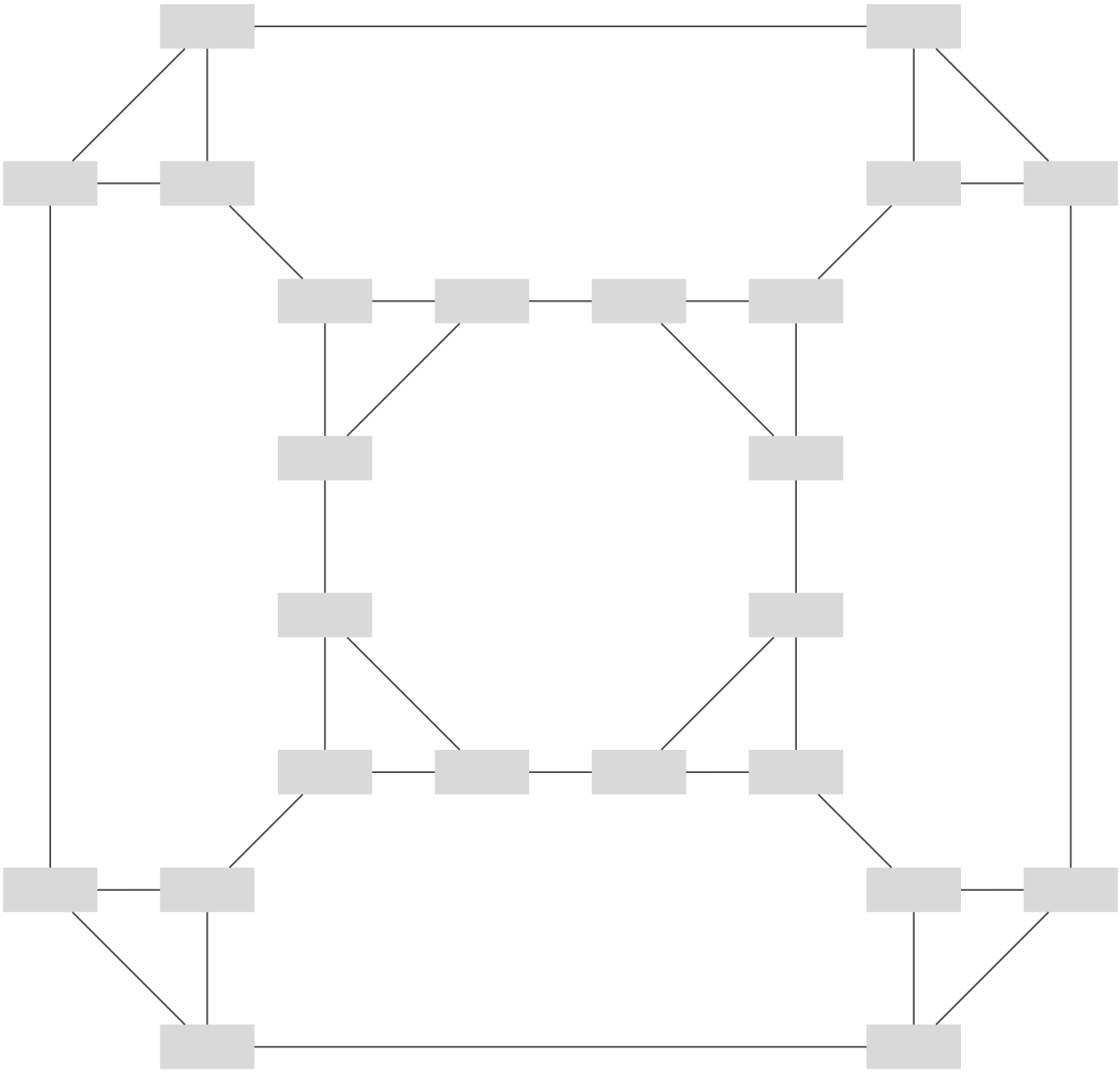
#**2(a)**: Cayley table for the first mystery group, $G = \langle s, t \rangle$.

	1	t^2	s^2t	t	s^2	s^2t^2	s	st^2	t^2s	st	s^3	ts
1												
t^2												
s^2t												
t												
s^2												
s^2t^2												
s												
st^2												
t^2s												
st												
s^3												
ts												

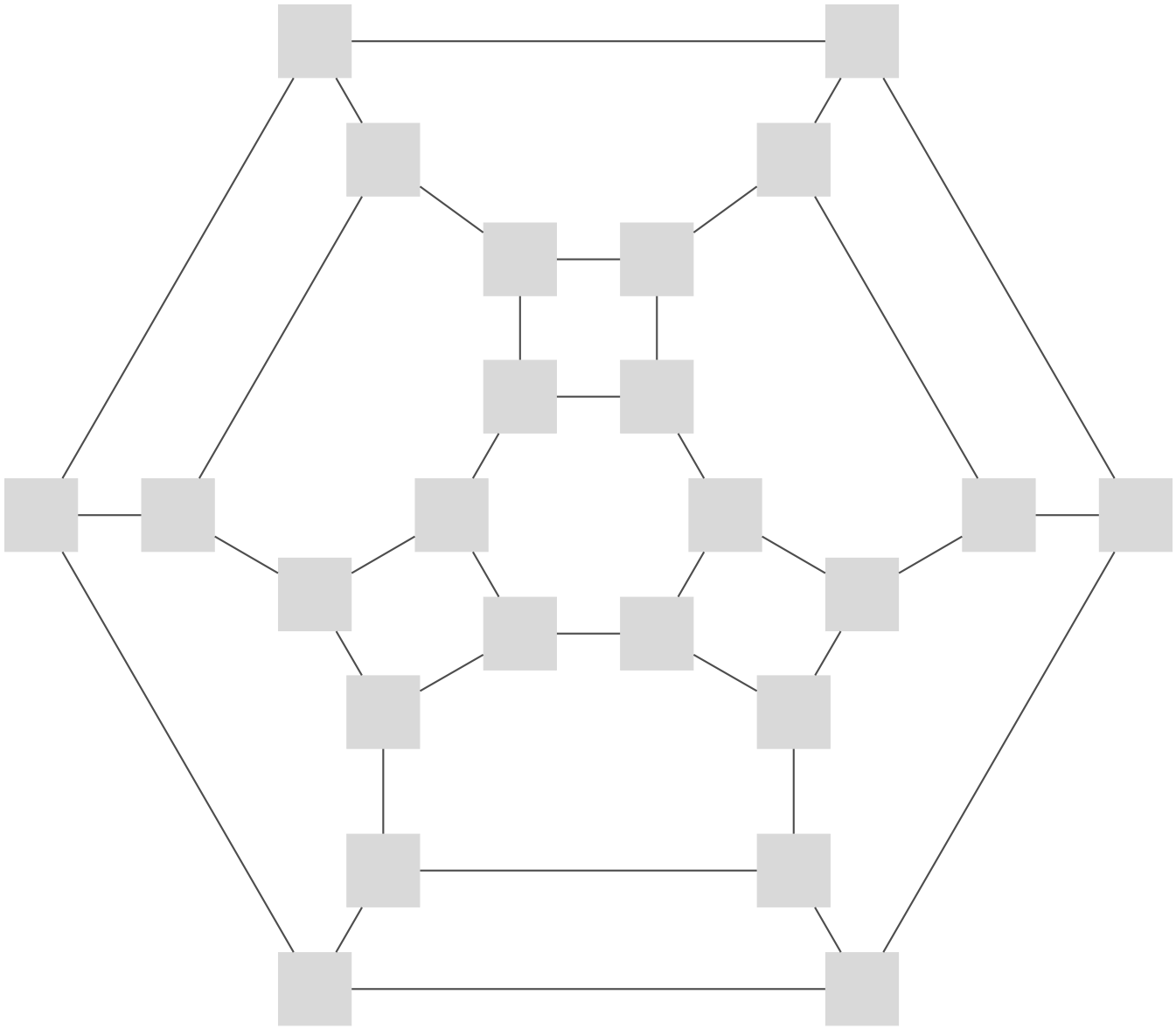
#**2(a)**: Cayley table for the second mystery group, $G = \langle a, x \rangle$.

	e	x	y	z	a	b	c	d	a^2	b^2	c^2	d^2
e												
x												
y												
z												
a												
b												
c												
d												
a^2												
b^2												
c^2												
d^2												

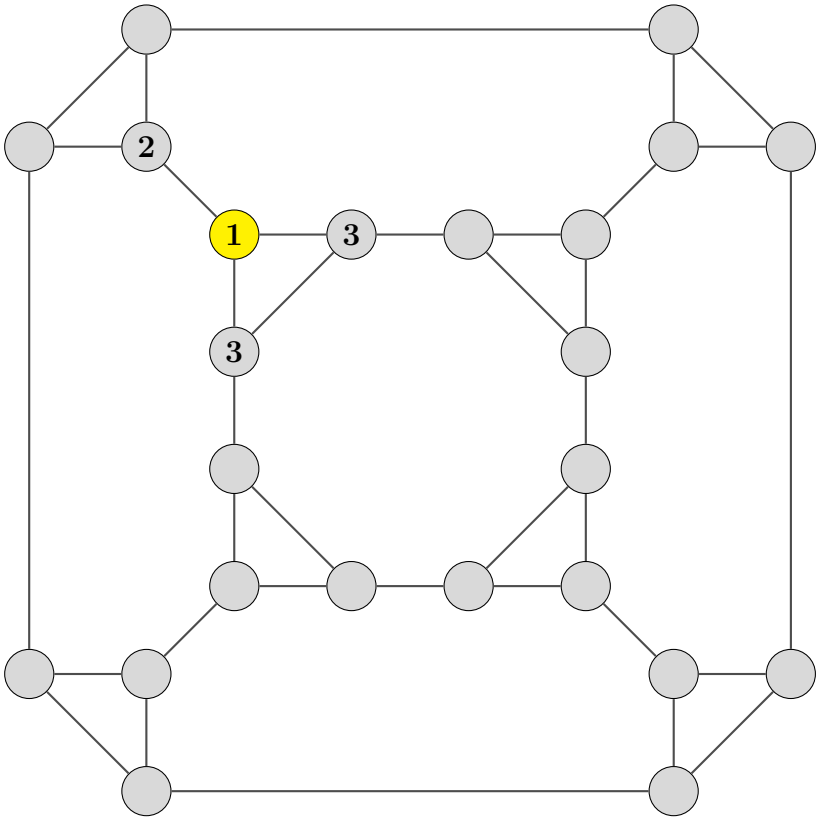
#3(a): Cayley graph for the first mystery group, labeled with 1×3 tiles.

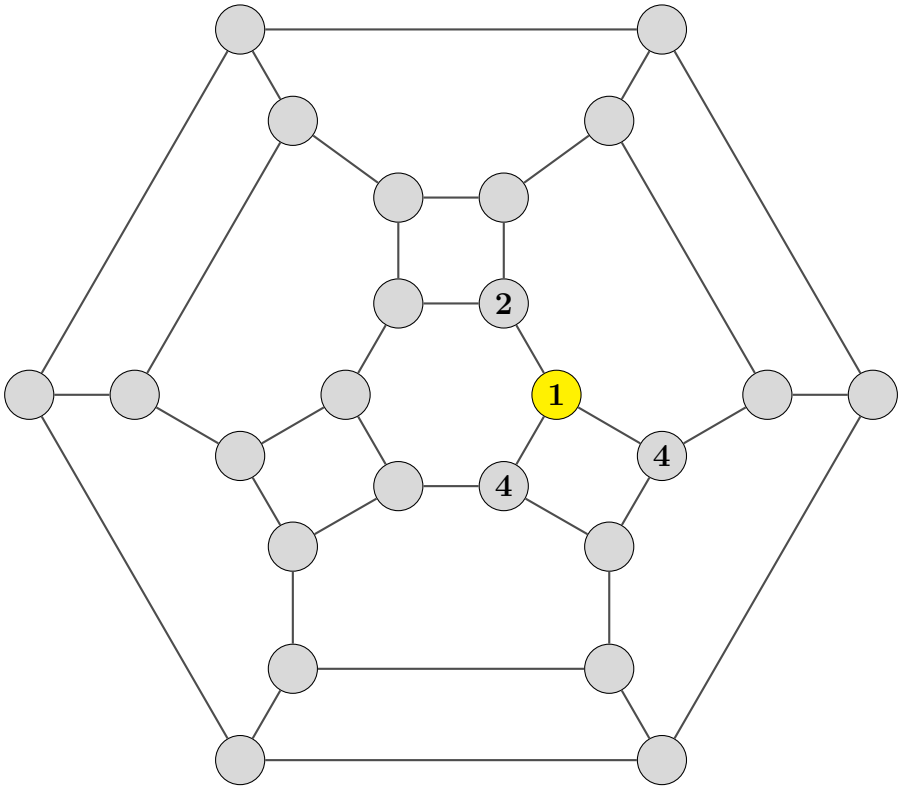


#3(a): Cayley graph for the second mystery group, labeled with square tiles.

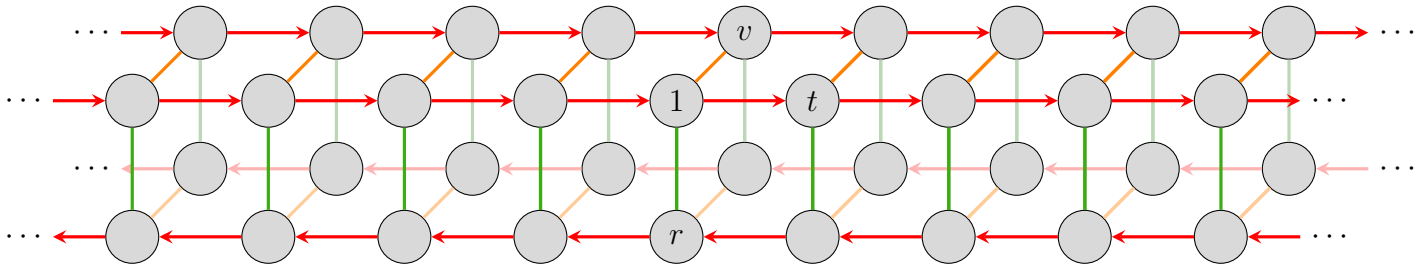


#**3(b)**: Cayley graphs for the mystery group, with the nodes labeled by the *order* of the corresponding element.

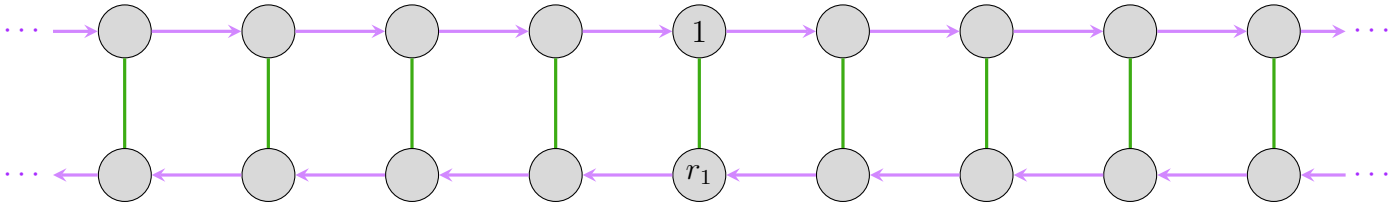




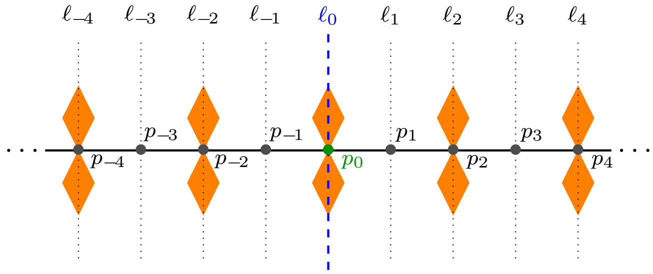
#**4(a)**: Cayley graph for the frieze group $\mathbf{Frz}_1 = \langle t, v, r \rangle$, generated by a translation, vertical reflection, and 180° rotation.

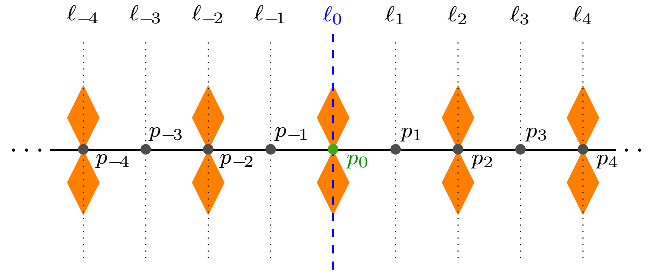


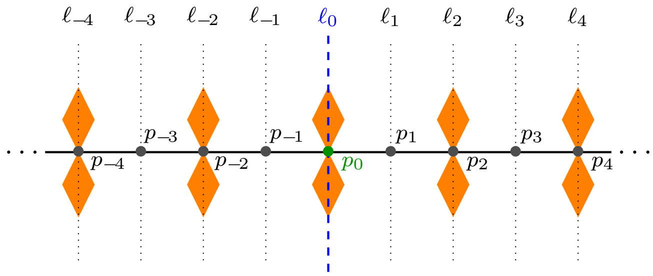
#**4(d)**: Cayley graph for the frieze group $\mathbf{Frz}_2 = \langle g, r \rangle$, generated by a glide reflection and a 180° rotation.

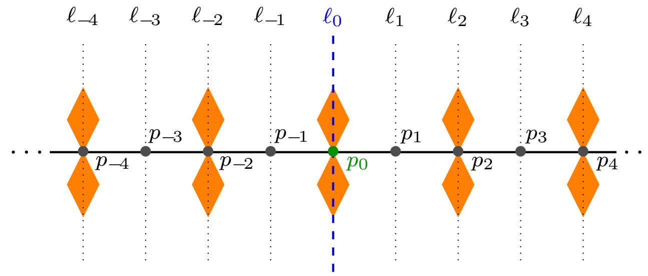


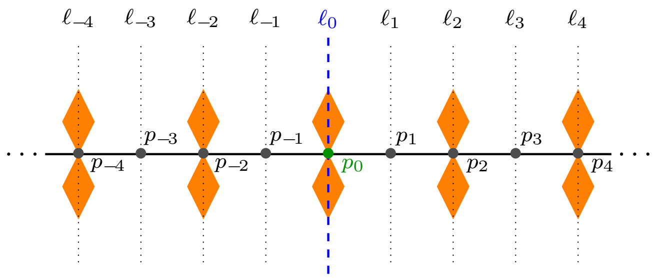
Blank copies of **Frieze 1** to use as scratch paper for problems 4 and 5.

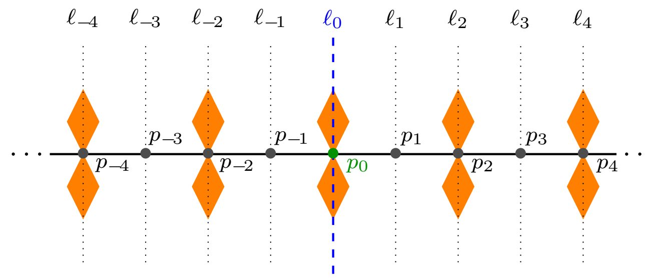


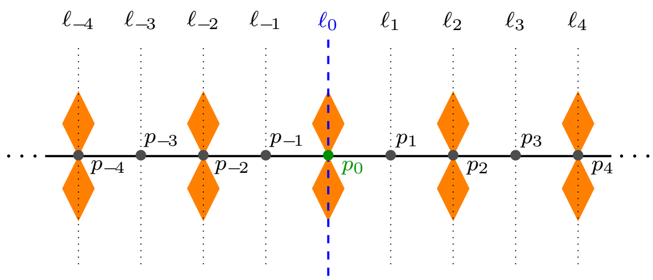


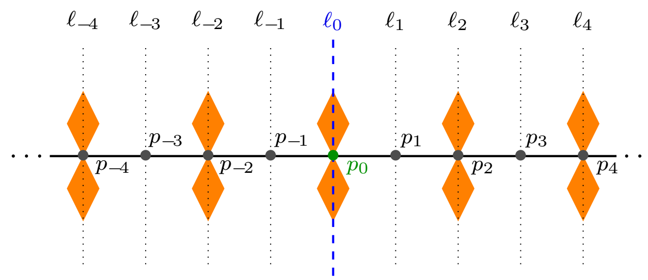


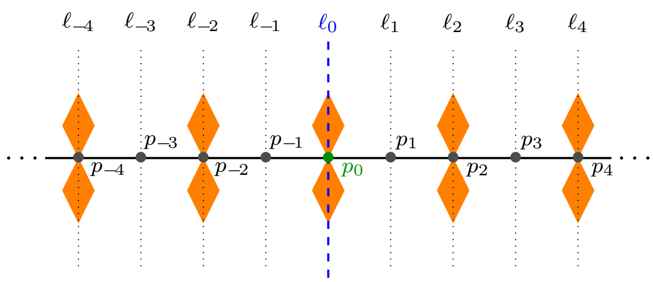


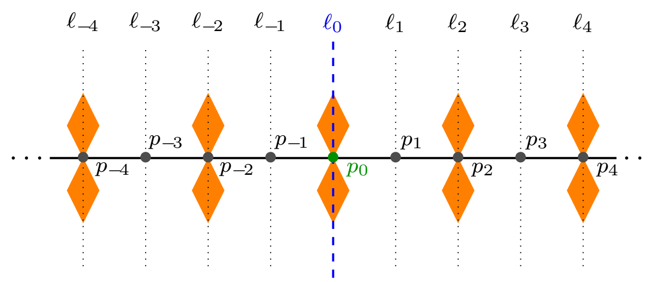












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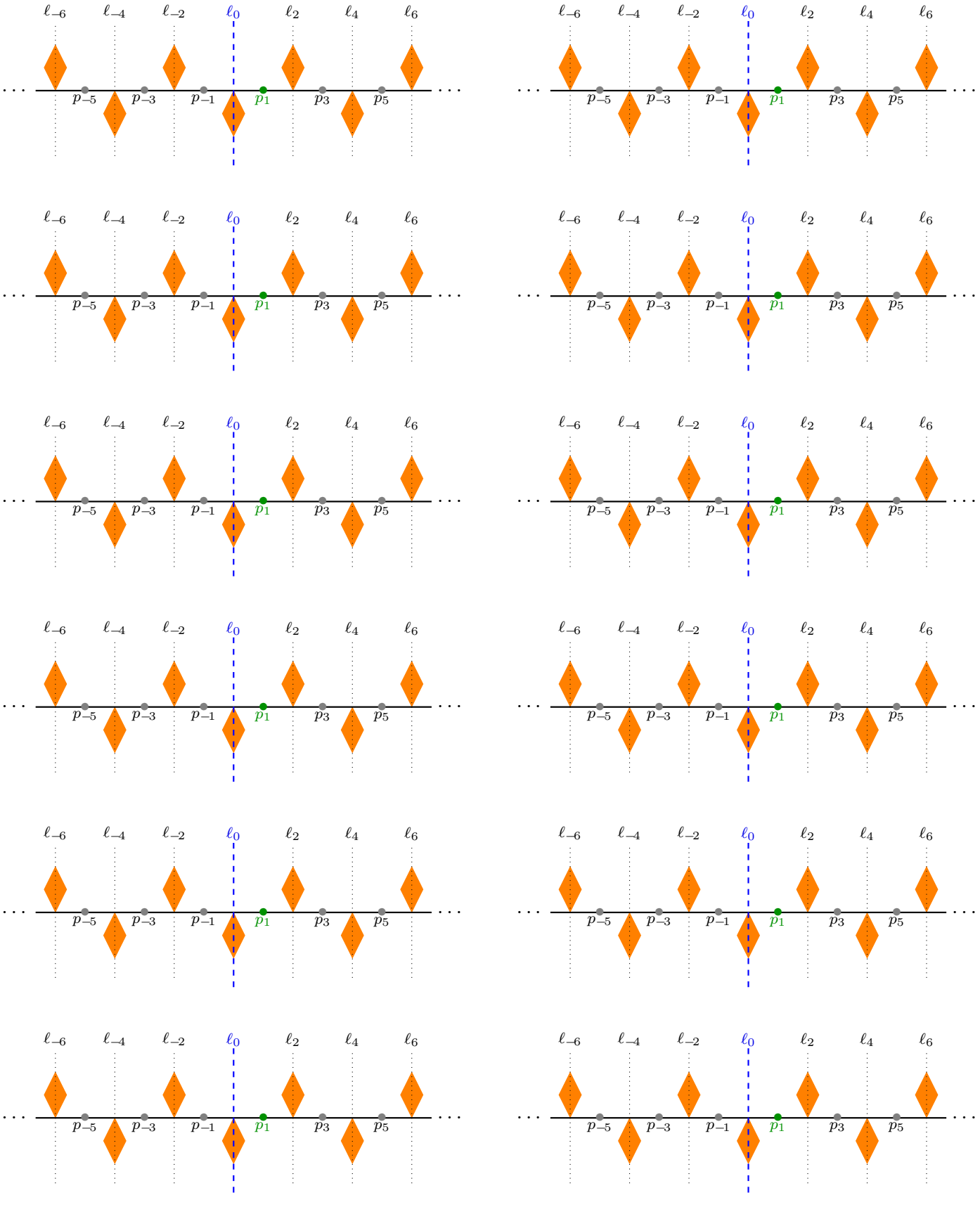

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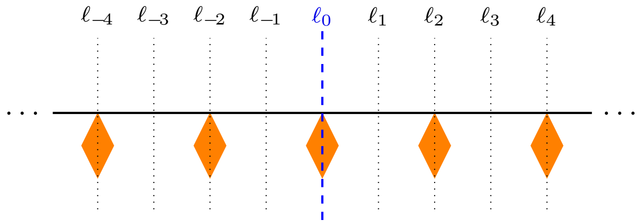
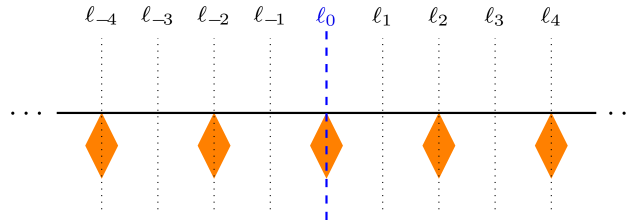
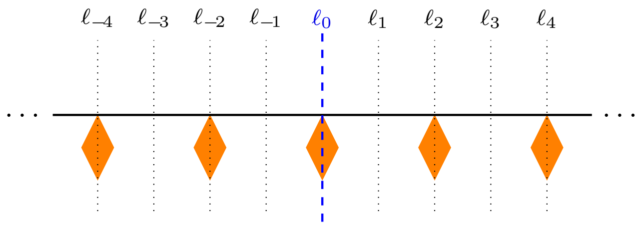
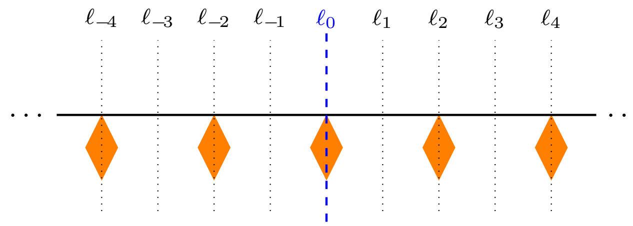
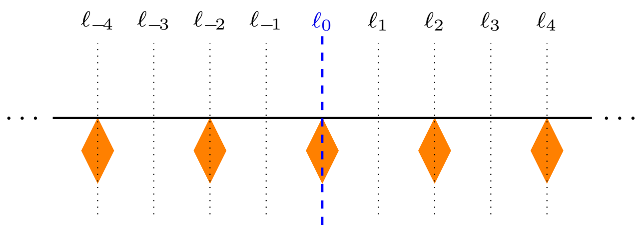
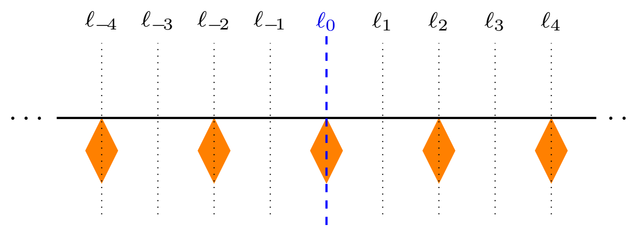


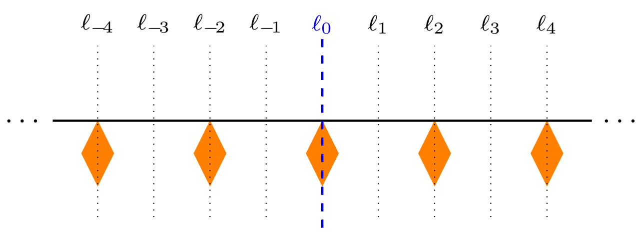


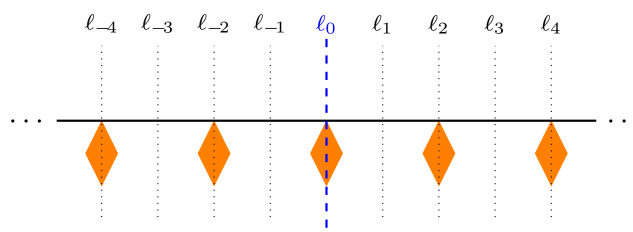


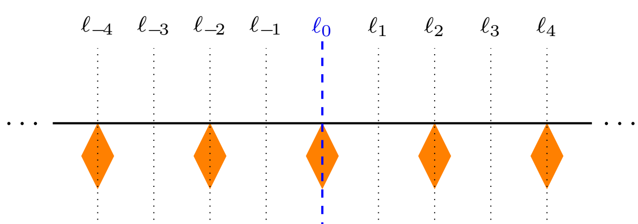


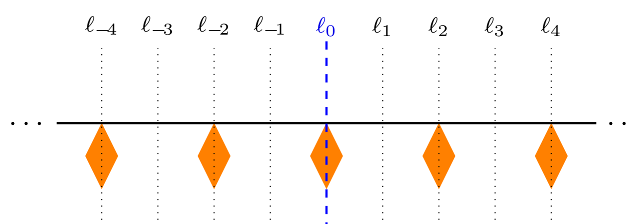


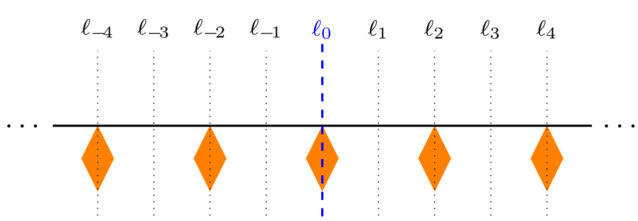


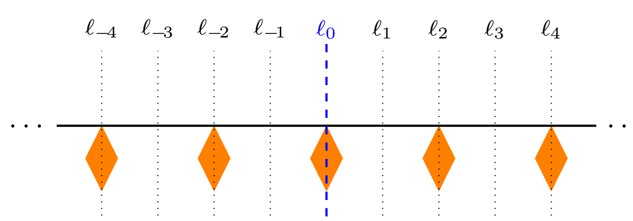




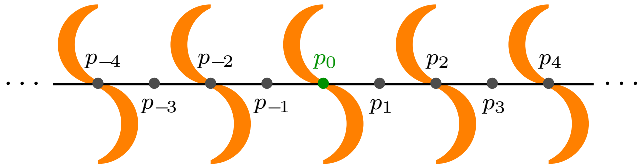


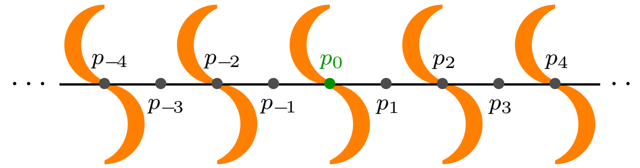


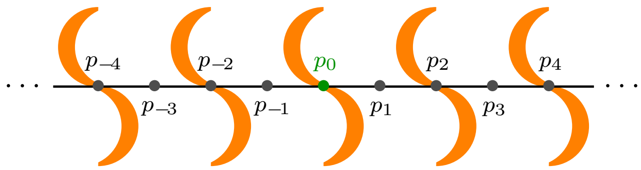


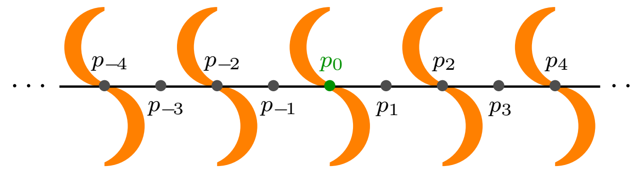


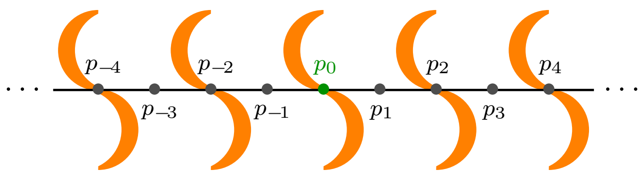
Blank copies of **Frieze 4** to use as scratch paper for problems 4 and 5.

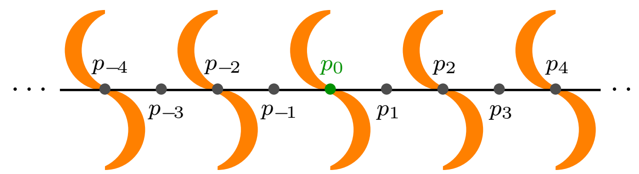


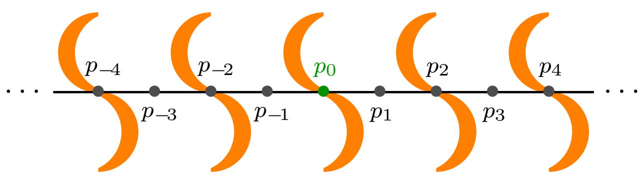


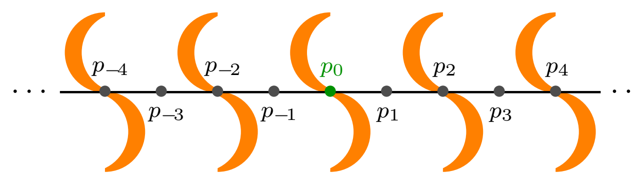


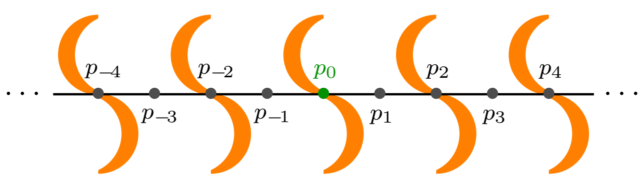


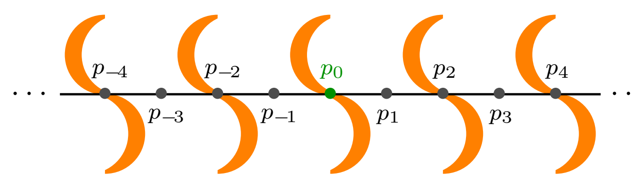


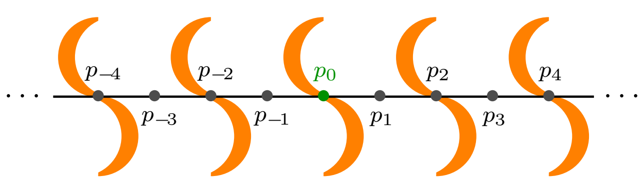


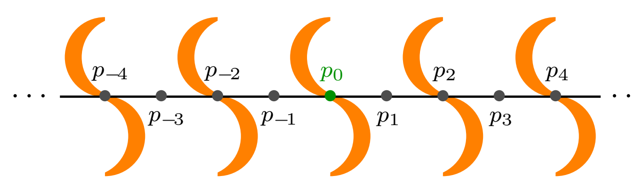












Blank copies of **Friezes 5–7** to use as scratch paper for problems 4 and 5.