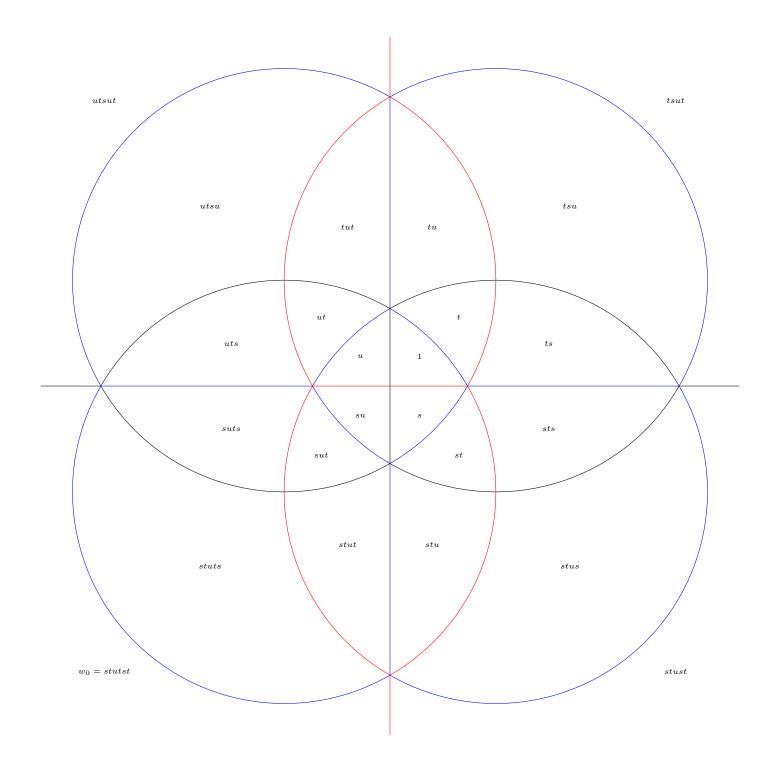
## SOERGELBOOK APPENDIX:

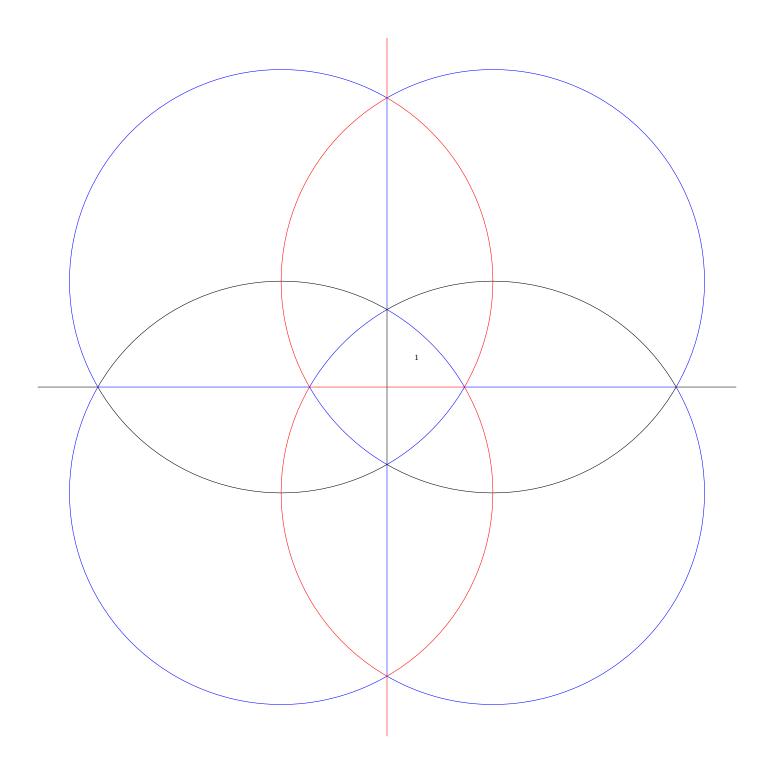
## SOME EXAMPLE COMPUTATIONS OF KAZHDAN–LUSZTIG BASES IN TYPES $A_3,\ \widetilde{A}_2$

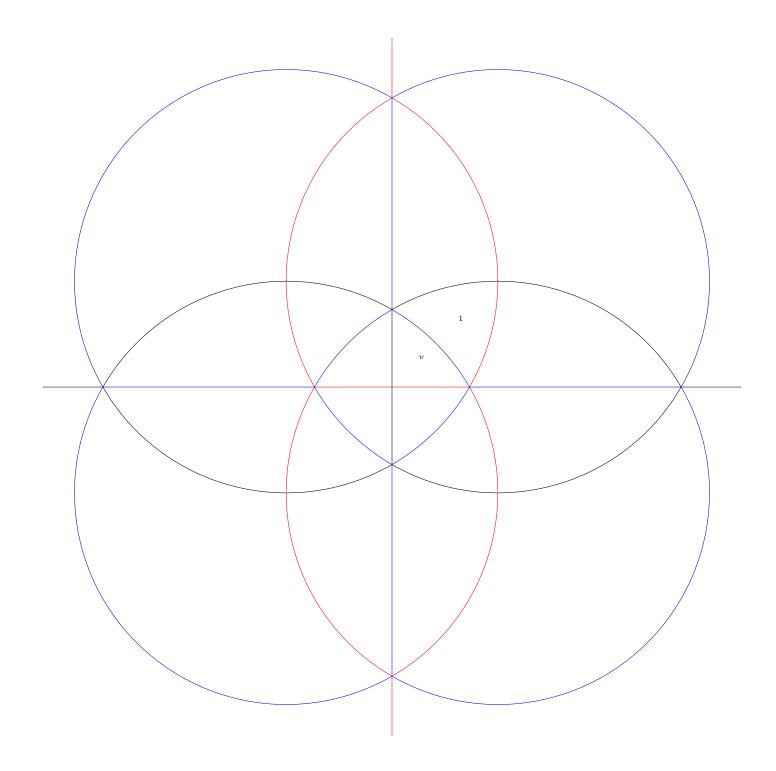
1. Type  $A_3$ 

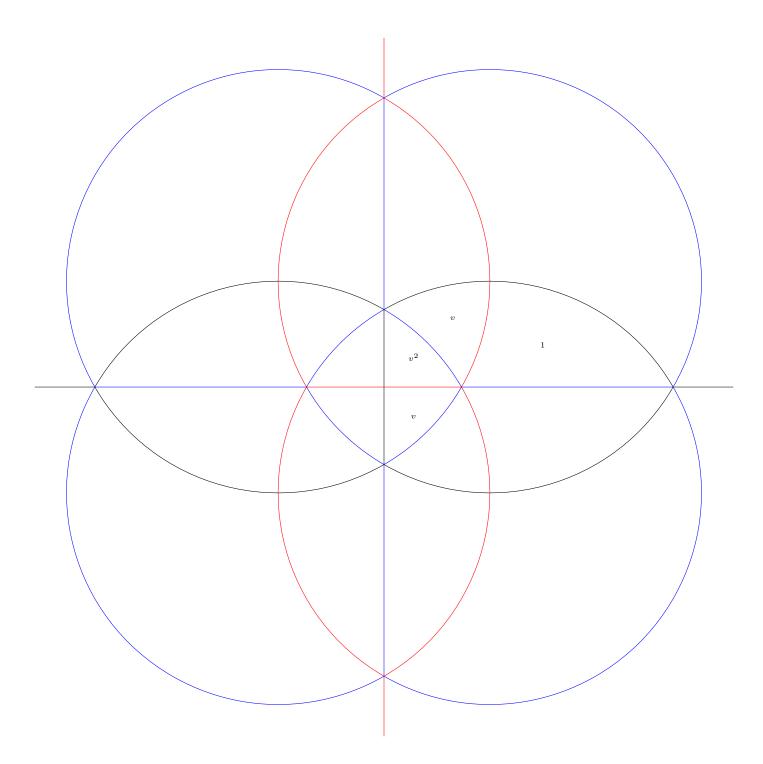
Date: November 13, 2018.

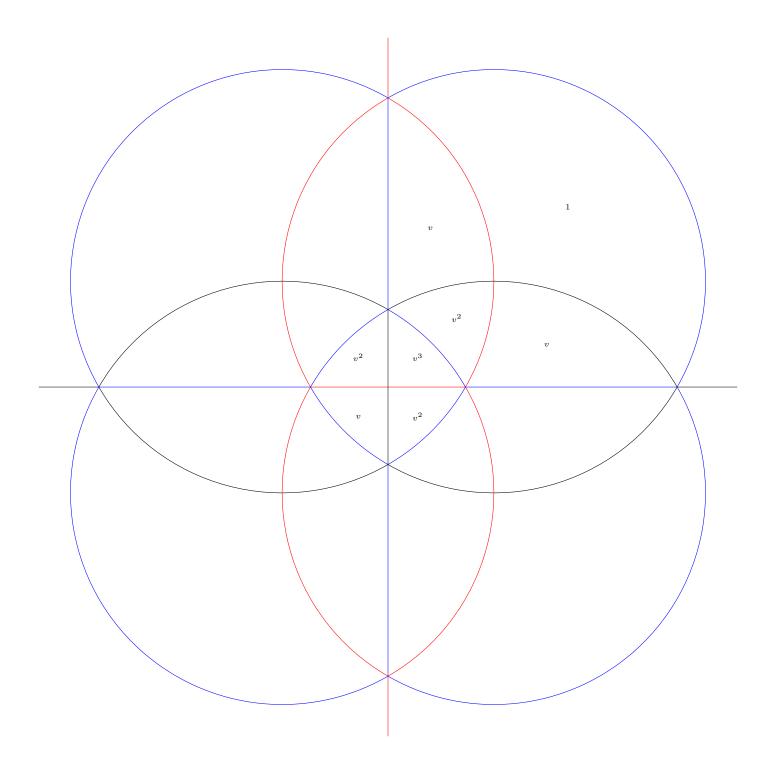


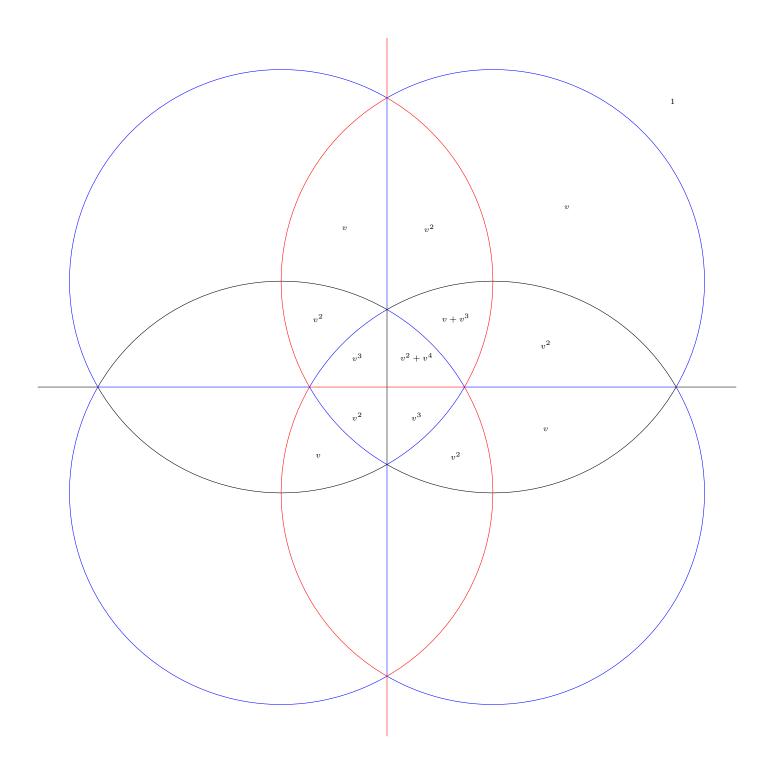
3



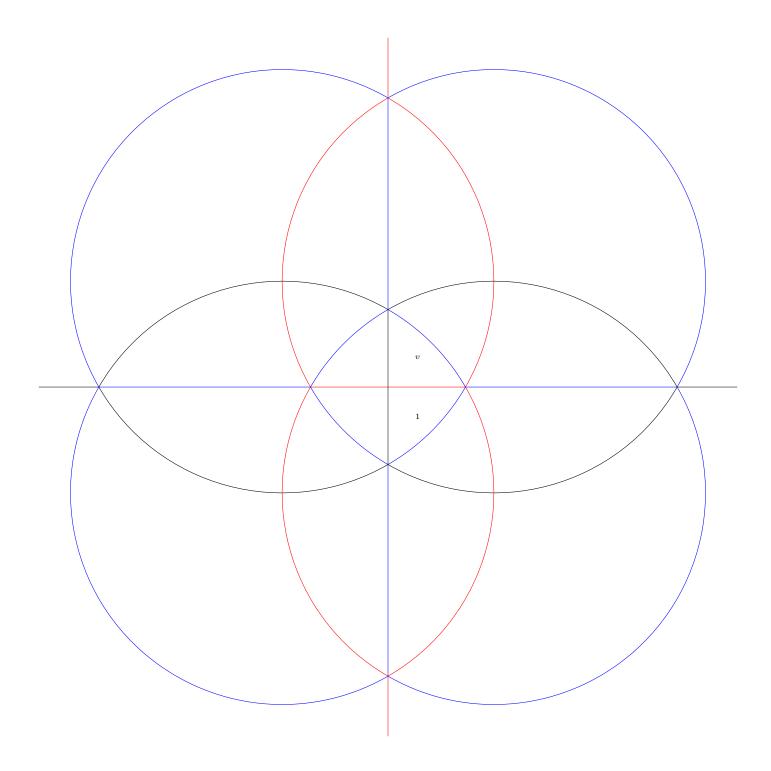


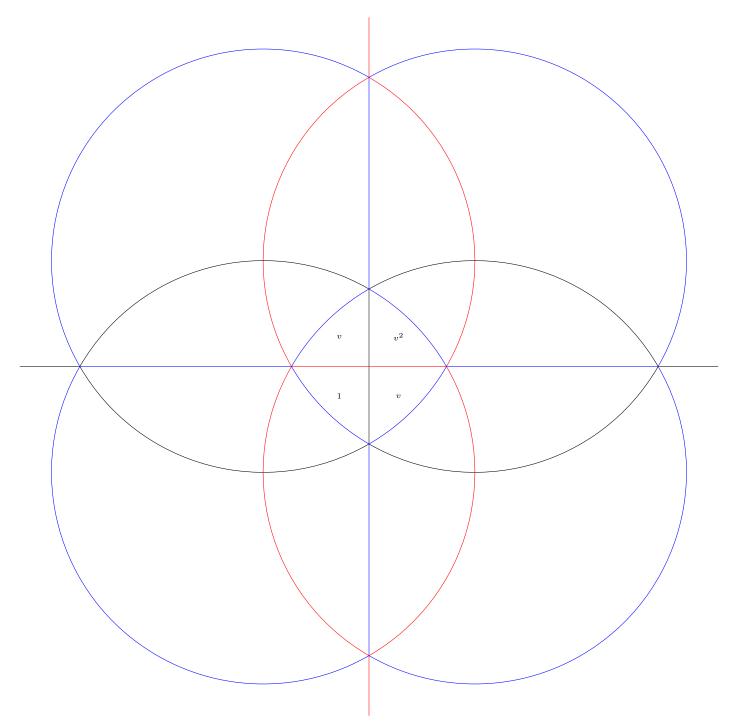


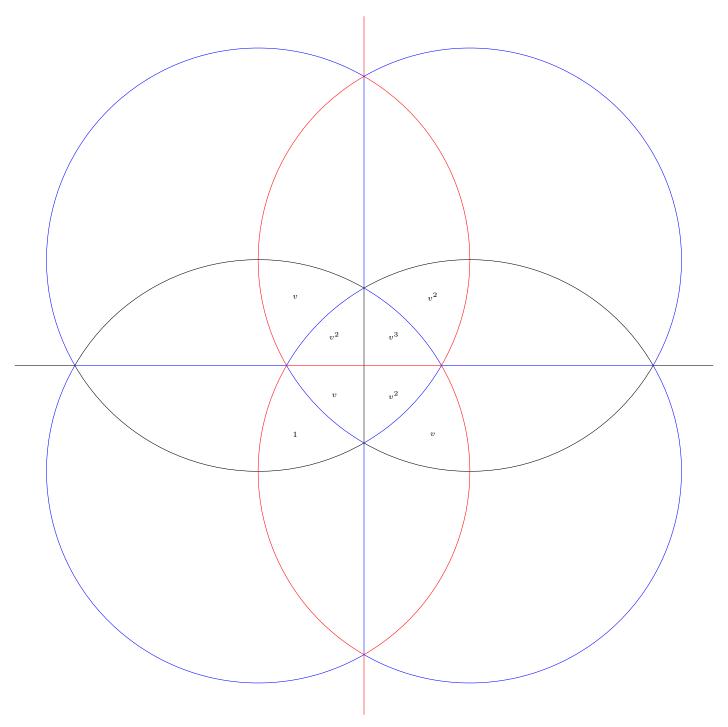


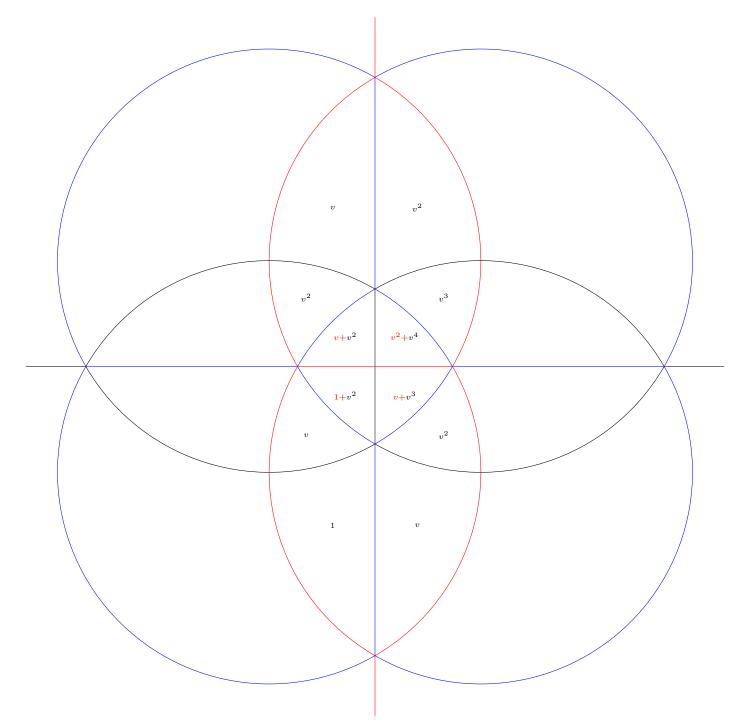


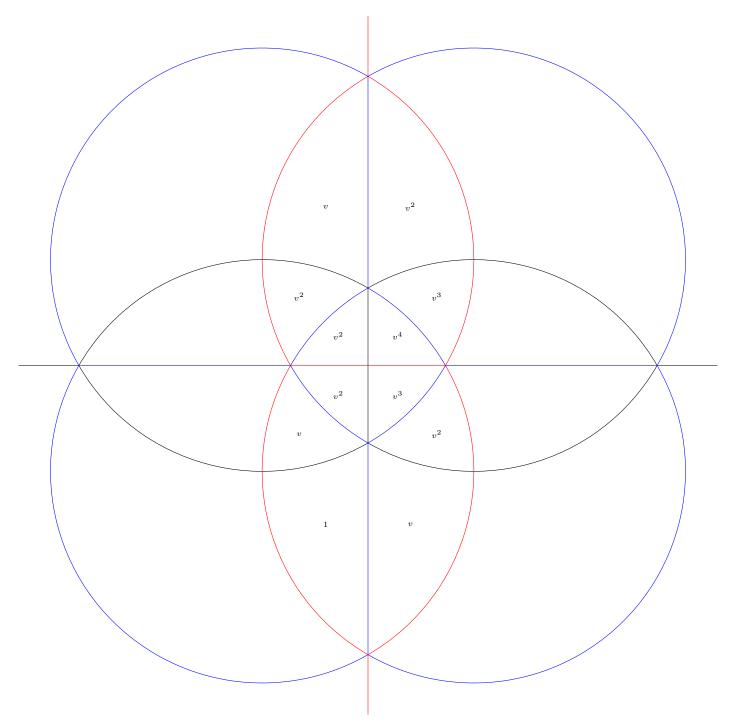
		1
		v
v	v <sup>2</sup>	
v <sup>2</sup>	$v + v^3$ $v^2 + v^4$	$v^2$
v <sup>2</sup>	v <sup>3</sup>	υ







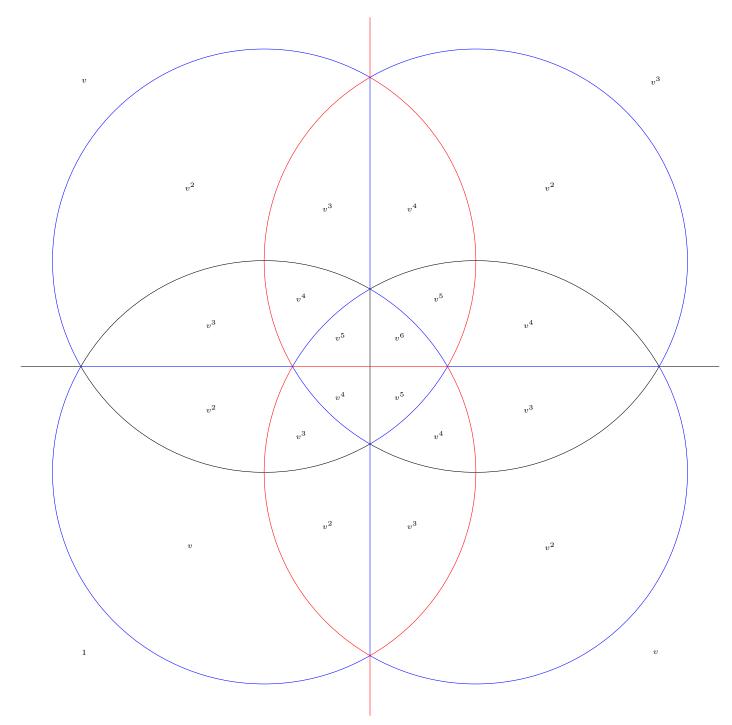




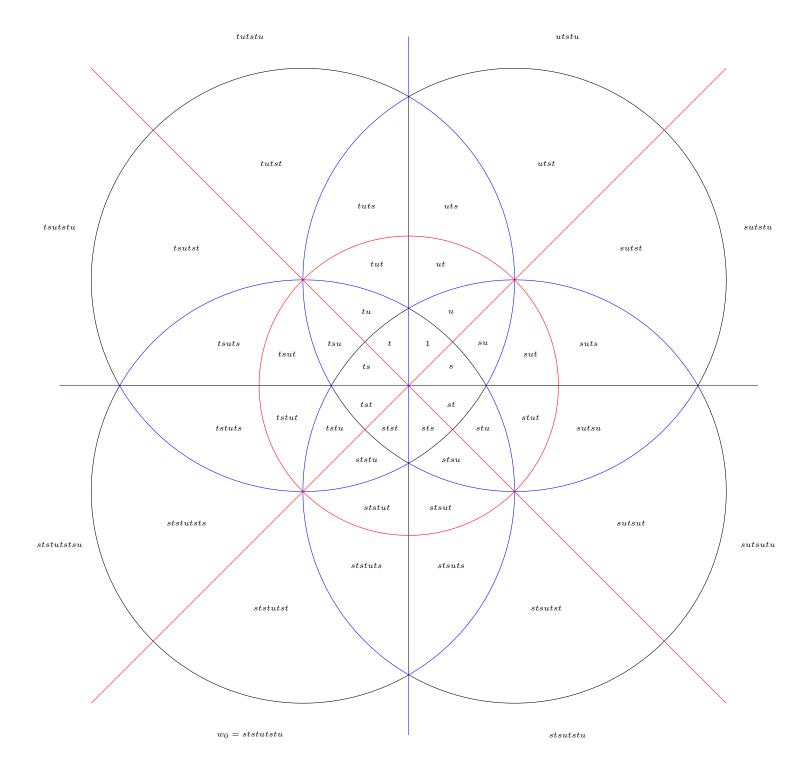
υ	$v^2$ $v^3$	
$v^2$	$v^{3}$ $v^{4}$ $v^{2} + v^{4}$ $v^{3} + v^{5}$ $v^{2} + v^{4}$ $v^{3} + v^{4} + v^{4}$ $v^{4} + v^{4} + v^{4} + v^{4}$ $v^{2} + v^{4} + v^{4} + v^{4}$ $v^{2} + v^{4} + v^{4} + v^{4} + v^{4}$ $v^{2} + v^{4} + v^{4$	
1		

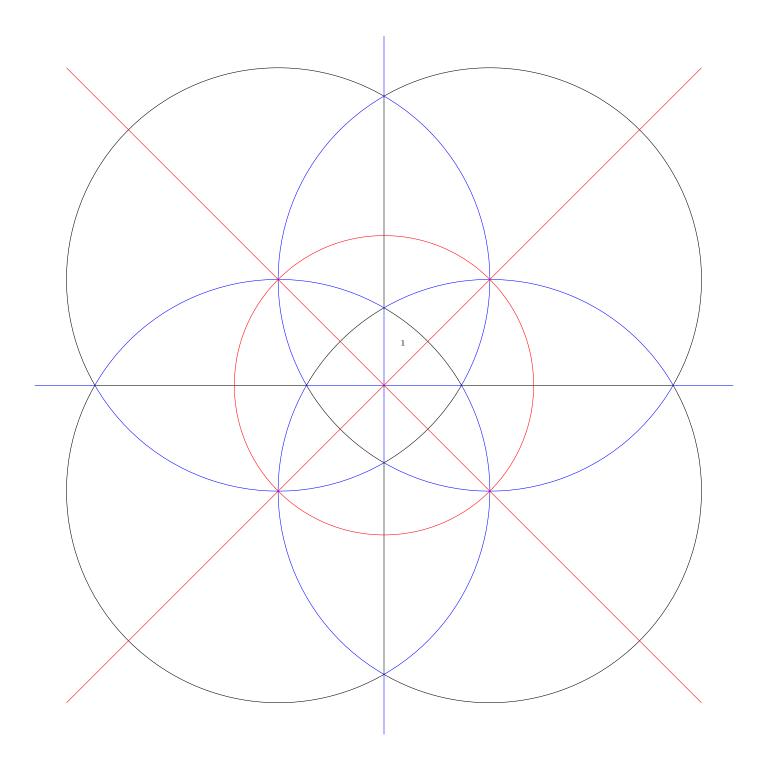
15

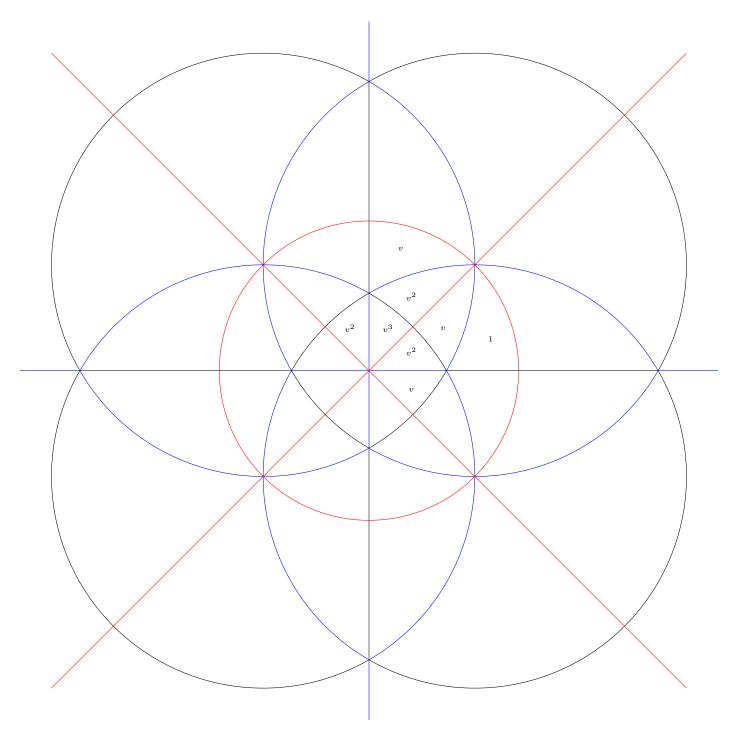
v		$v^3$
$v^2$ $v^2$ $v^2$	$v+v^{3} \qquad v^{2}+v^{4}$ $2v^{2}+v^{4} \qquad 2v^{3}+v^{5}$ $2v^{3}+v^{5} \qquad 2v^{4}+v^{6}$	$v^2$ $v^2+v^4$
1+v2	$   \begin{array}{ccccccccccccccccccccccccccccccccccc$	v+v <sup>3</sup>
1	$1+v^2$ $v^2+v^3$	$v^2$

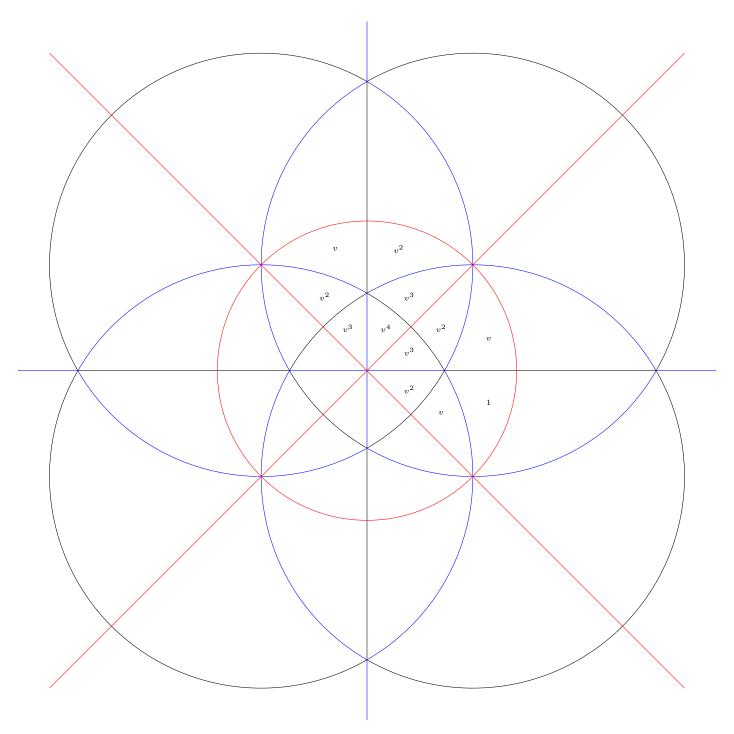


2. Type  $B_3$ 

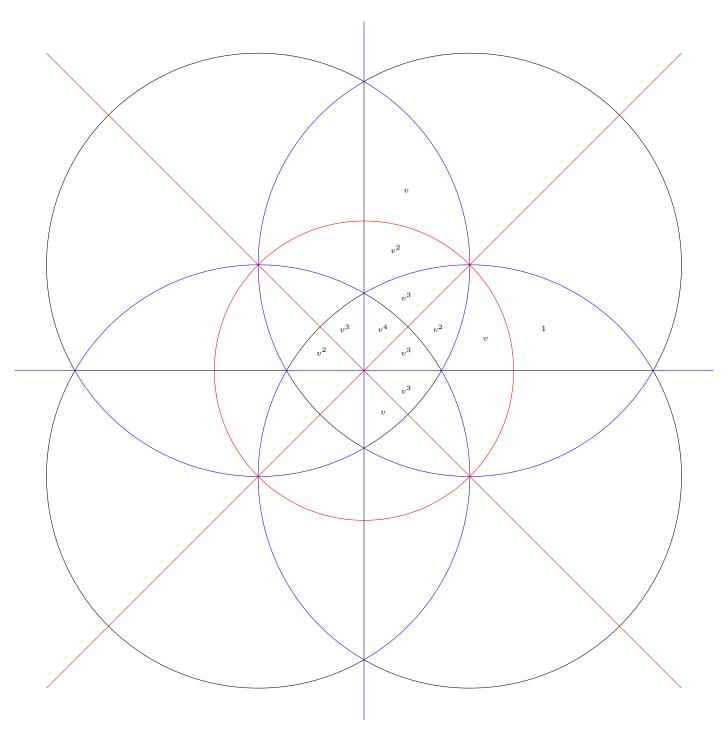






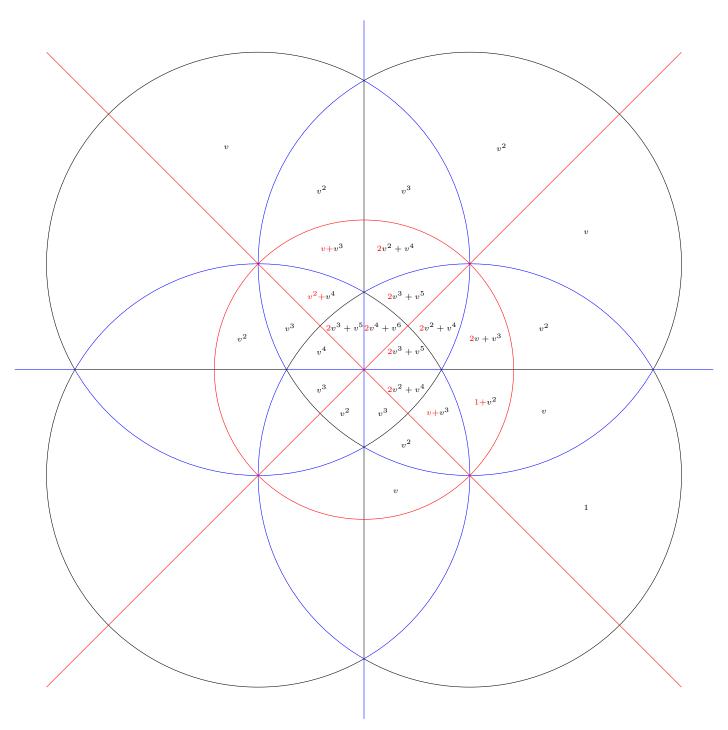


$v+v^{3}$ $v^{2}+v^{4}$ $v+v^{3}$ $v+v^{3}$ $v+v^{3}$ $v+v^{3}$ $v+v^{3}$ $v+v^{3}$ $v+v^{3}$	



v	$v^2$
$v^2$ $v^3$ $v^2$ $v^4$ $v^3$	$v^{3}$ $v^{2} + v^{4}$ $v^{3} + v^{5}$ $v + v^{3}$ $v^{2} + v^{4}$

25



$\begin{array}{cccccccccccccccccccccccccccccccccccc$		
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$v^2$	v <sup>3</sup>
$v^2$ $v^3$ $v^3$ $v^2$ $v$	$v^2$ $v^3 + v^5$ $v^4$	$v^4 + v^6$ $v^2 + v^4$ $v + v^3$ $v^2$

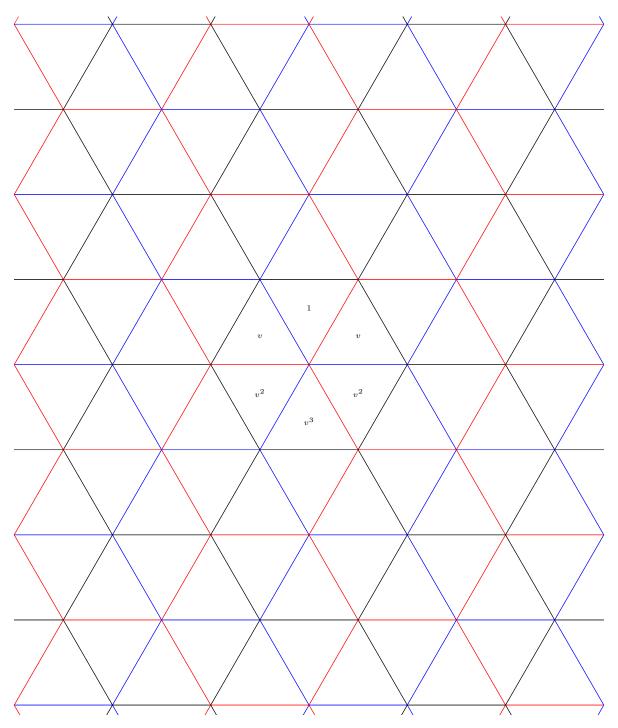
$v^2$	$v^3$
$v^{5}$ $v^{6}$ $v^{5}$ $v^{2}$ $v^{3}$ $v^{4}$ $v^{6}$ $v^{5}$	$v^4$ $v^5$ $v^6$ $v^7$ $v^5$ $v^4$ $v^3$
v <sup>4</sup>	v <sup>5</sup> v <sup>4</sup> v <sup>3</sup> v <sup>2</sup> v v

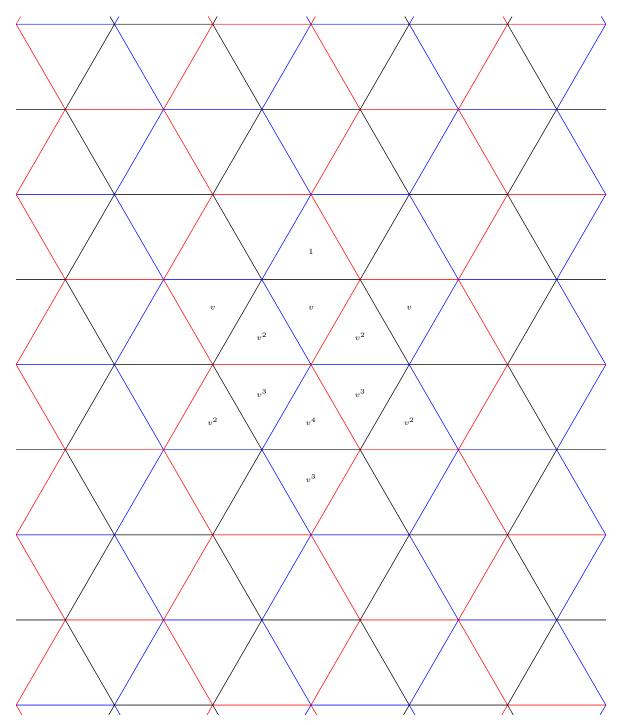
	$v^2$	$v^3$
	v <sup>3</sup>	$v^4$
v	$v^2 + v^4$ $v^3 + v^5$	$v^3 + v^5$ $v^4 + v^6$ $v^3$
	$v^4$ $v^4 + v^6$	$v^{5} + v^{7}$ $v^{6} + v^{8}$ $v^{4} + v^{6}$ $v^{3} + v^{5}$ $v^{2} + v^{4}$
	$v^2$ $v^3$ $v^4$ $v^4$ $v^3$ $v^2$	$v^{4} + v^{6}$ $v^{3} + v^{5}$ $v^{3} + v^{5}$ $v^{2} + v^{4}$ $v^{2} + v^{4}$ $v^{3}$
	v	$v^2$
		1

3. Type  $\widetilde{A}_2$ 

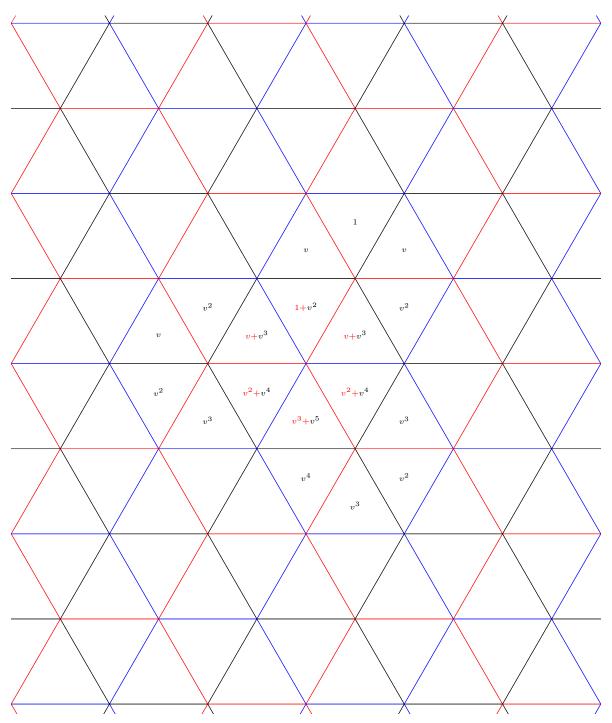
$\langle \hspace{0.5cm} \hspace{0.5cm}$
stsut stsus
tsus stsu stus
tsu sts stu
tsus ts stut
tus t sut
tust $tu$ $1$ $su$ $suts$
tusts tut u sus susts
tuts us sust
utsus uts ust ustut
utsu usts ustu
$\langle \hspace{1cm} 1cm$

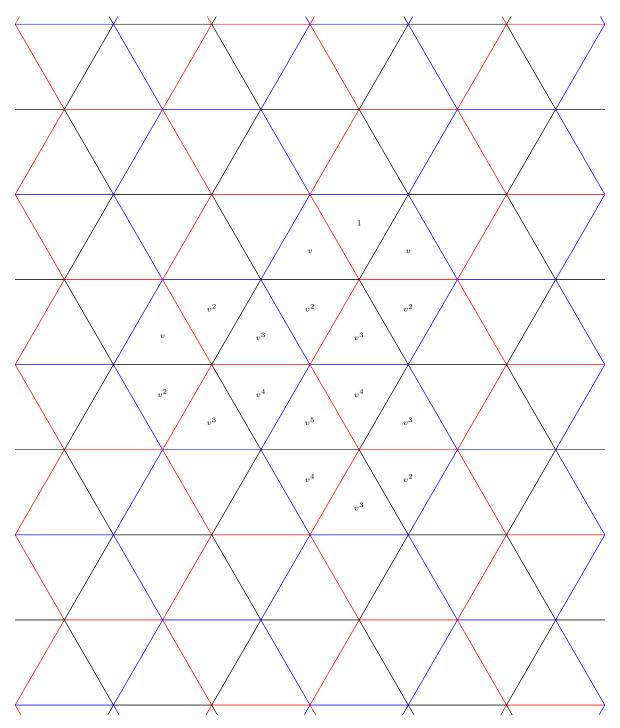
31





33



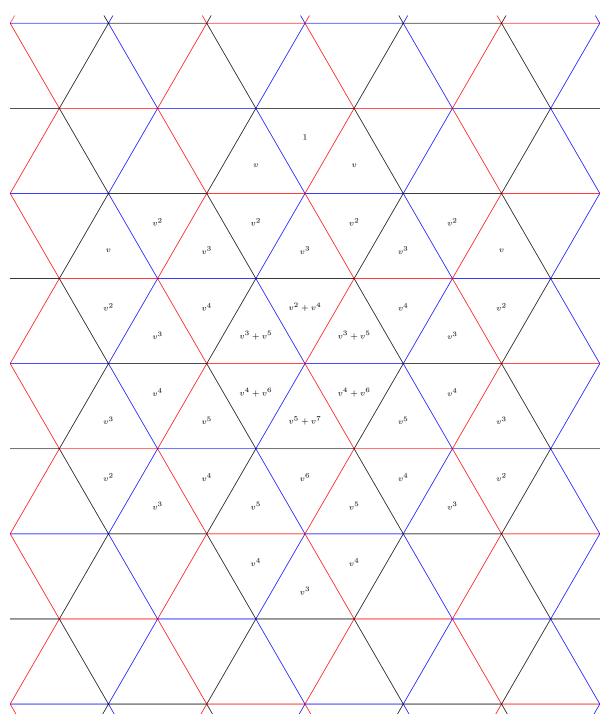


35

$v$ $v$ $v$ $v^2$ $v^2$	
$v \qquad v^3 \qquad v+v^3 \qquad v^3 \qquad v^2+v^4 \qquad v^2+v^4 \qquad v^2$	
$v^{3}$ $v^{3} + v^{5}$ $v^{3} + v^{5}$ $v^{3} + v^{5}$ $v^{4} + v^{6}$ $v^{4} + v^{6}$	
$v^3$ $v^5$ $v^3$ $v^2$	
v <sup>3</sup>	

$v^2$ $v^2$ $v^2$ $v^2$ $v^2$ $v^2$ $v^2$ $v^3$ $v^4$ $v^3$ $v^4$
$v^{2} \qquad v^{2} + v^{4} \qquad 1 + 2v^{2} + v^{4} \qquad v^{2} + v^{4} \qquad v^{2}$ $v + 2v^{3} + v^{5} \qquad v + 2v^{3} + v^{5} \qquad v^{3}$
$v^{2}+v^{4}$ $v^{2}+2v^{4}+v^{6}$ $v^{2}+2v^{4}+v^{6}$ $v^{4}$ $v^{3}+v^{5}$ $v^{3}+v^{5}$ $v^{3}+v^{5}$ $v^{3}+v^{5}$
$v^{2}$ $v^{3}$ $v^{4}$ $v^{4}+v^{6}$ $v^{2}+v^{4}$ $v^{2}$ $v^{3}+v^{5}$ $v^{3}+v^{5}$

37



$v$ $v^3$ $v + v^3$ $v + v^3$ $v^3$ $v$ $v^2 + v^4$
$v^{3} \qquad 2v^{3} + v^{5} \qquad 2v^{3} + v^{5} \qquad v^{3}$ $v^{2} \qquad v^{2} + v^{4} \qquad 2v^{4} + v^{6} \qquad 2v^{4} + v^{6} \qquad v^{2} + v^{4} \qquad v^{2}$
$v^{3} \qquad v^{3} + v^{5} \qquad 2v^{5} + v^{7} \qquad 2v^{5} + v^{7} \qquad v^{3} + v^{5} \qquad v^{3}$ $v^{4} \qquad 2v^{4} + v^{6} \qquad 2v^{6} + v^{8} \qquad 2v^{4} + v^{6} \qquad v^{4}$
$v^{3}$ $v^{3} + v^{5}$ $2v^{5} + v^{7}$ $v^{3} + v^{5}$ $v^{3}$ $v^{4}$ $v^{2}$
$v^3$ $v^5$ $v^5$ $v^4$ $v^4$
v <sup>3</sup>