$$\text{distance} = \frac{1}{\|(2,3)\|} = .27$$

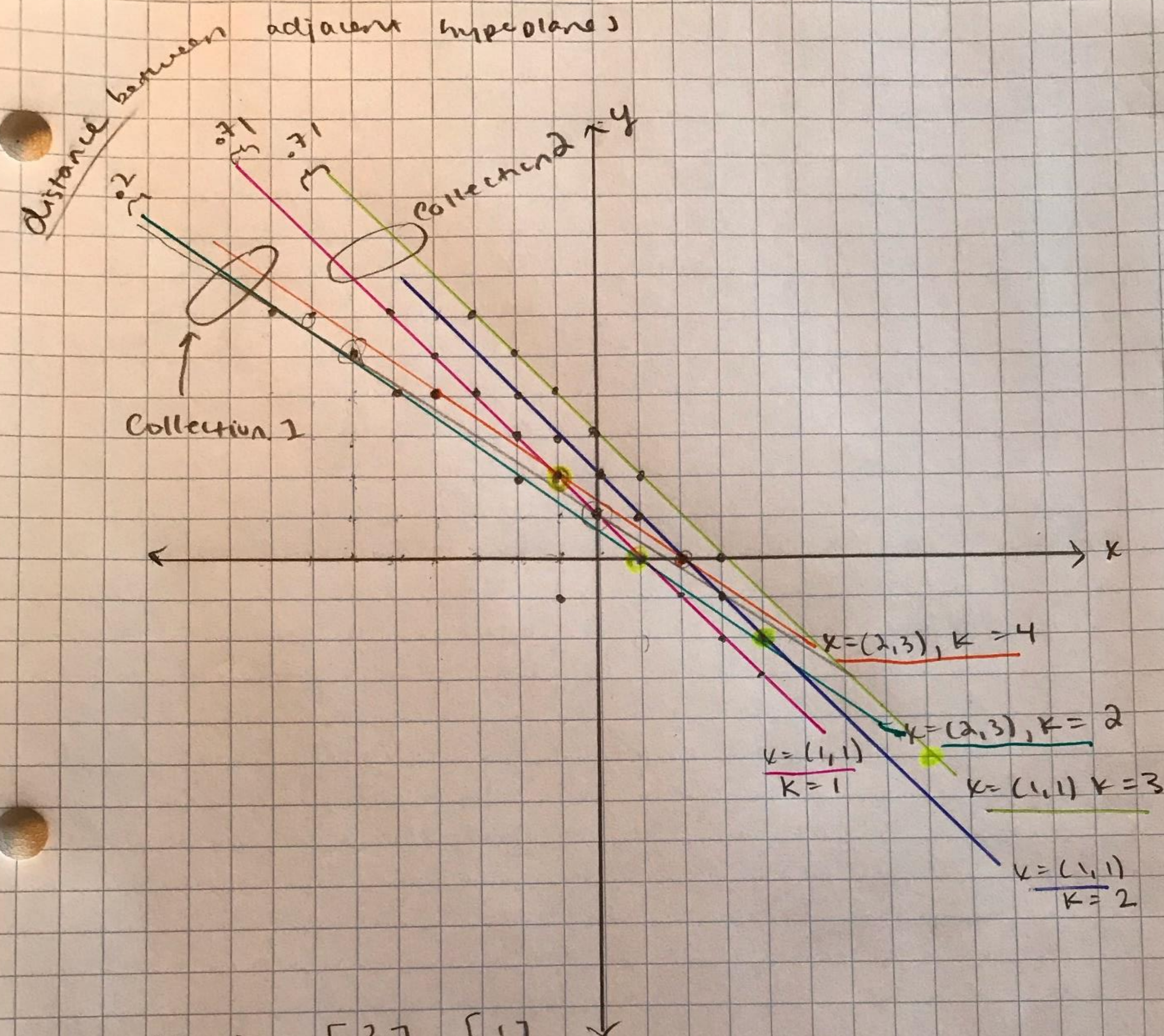
let $x = (2,3)$

for $x \cdot y = 1$	$x \cdot y = 2$	$x \cdot y = 3$	$x \cdot y = 4$
$y = (-1,1)$	$y = (1,0)$	$y = (0,1)$	$y = (2,0)$
	$(-2,2)$	$(-6,+5)$	
	$(-5,4)$	$\vdots$	
	$(-8,6)$		
	$\vdots$	$\vdots$	$(-1,+2)$
			$(-7,+6)$
			$(-4,+4)$

$$\text{distance} = \frac{1}{\|(1,1)\|} = .71$$

let $x = (1,1)$

for $x \cdot y = 1$	$x \cdot y = 2$	$x \cdot y = 3$
$y = (0,1)$	$y = (1,1)$	$y = (2,1)$
$(1,0)$		$(1,2)$
	$(2,0)$	
$(-1,2)$	$(0,2)$	$(3,0)$
$(-2,3)$	$(1,1)$	$(0,3)$
$(-3,4)$		
$(-4,5)$	$(-1,-3)$	$(-1,4)$
	$(-2,-4)$	$(-2,5)$
$(2,-1)$	$(-3,6)$	$(-3,6)$
$(3,-2)$	$\vdots$	
$(4,-3)$	$(3,-1)$	$(4,-1)$
	$(4,-2)$	$(5,-2)$
	$\vdots$	$(6,-3)$



basis vectors = $\begin{bmatrix} 2 \\ 3 \end{bmatrix}$ $\begin{bmatrix} 1 \\ 1 \end{bmatrix}$

n = # of basis vectors = 2

- The dual lattice is the set of points that are intersections of n=2 hyperplanes, one from each collection

- This shows that every point in the dual lattice has an integer value when multiplied by a basis vector

- Since every point in the original lattice can be represented as a linear combination of the basis vectors, every point in the dual lattice has an integer value when multiplied by any vector from the original lattice