## Pictures of all the states

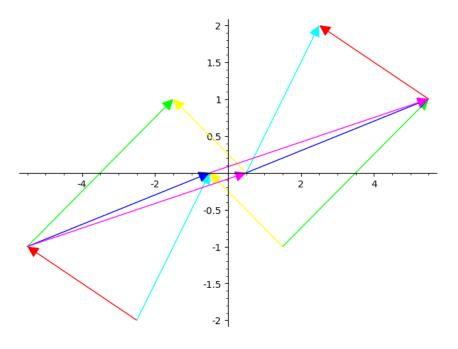
## Anand Deopurkar

April 27, 2022

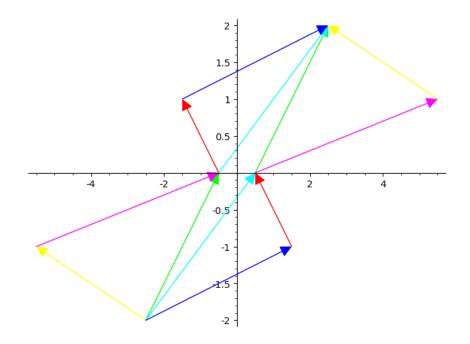
## Contents

```
for s in states:
```

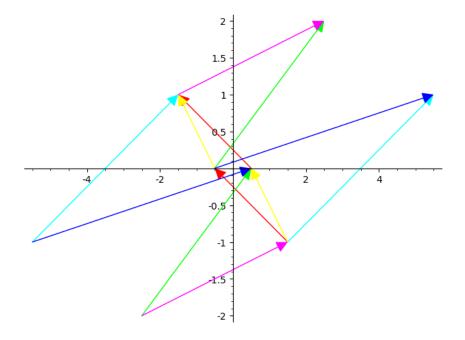
```
[v01, v02, v11, v12, v21, v22, v31, v32] = vector(expansive_motion(s).rays()[0])
V = matrix([[v01, v02], [v11, v12], [v21, v22], [v31, v32]])
plot_state(s)
print([(vector(ambient_basis[i])*V).dot_product(vector(ambient_basis[i])* central_
```



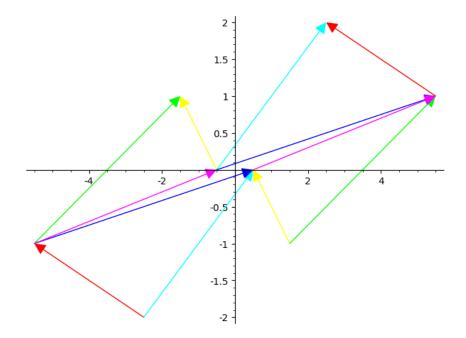
[19, 1, 13, -1]



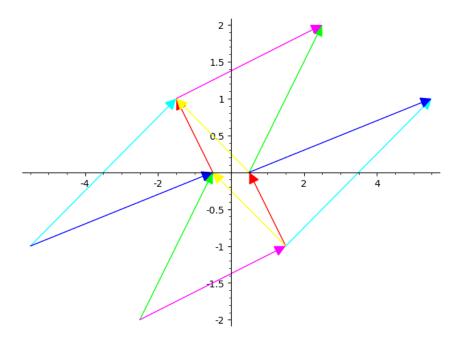
 $[-3/2,\,12,\,15/2,\,3/2]$ 



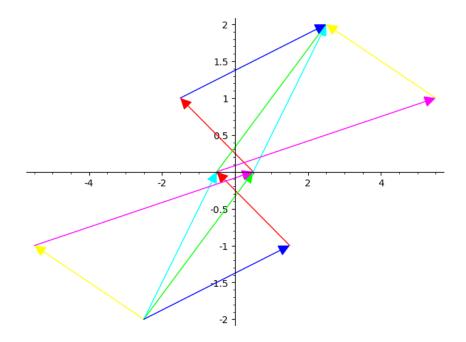
 $[39/2,\,39/2,\,3/2,\,\text{-}3/2]$ 



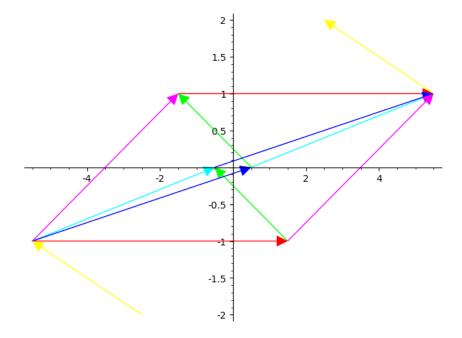
[15, -1, 15, 1]



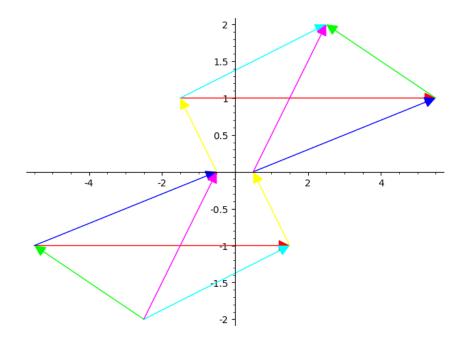
[9, 15, -1, 1]



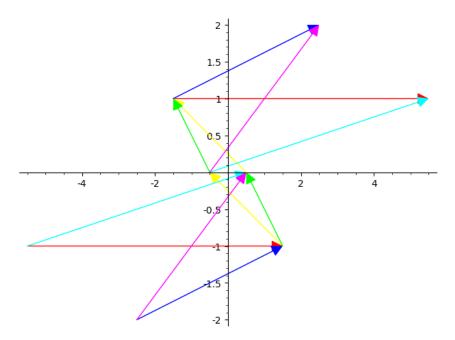
 $[1/2,\,9/2,\,3,\,\text{-}1/2]$ 



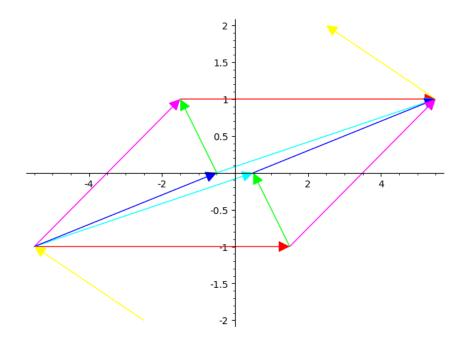
 $[17/2,\,0,\,0,\,0]$ 



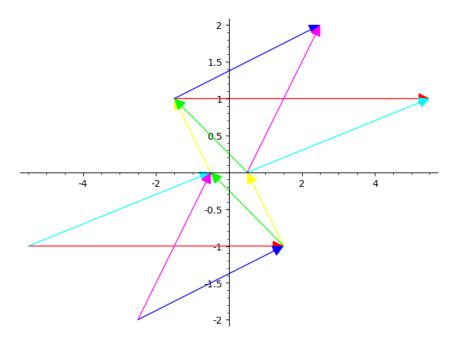
[9, 13, -1, 1]



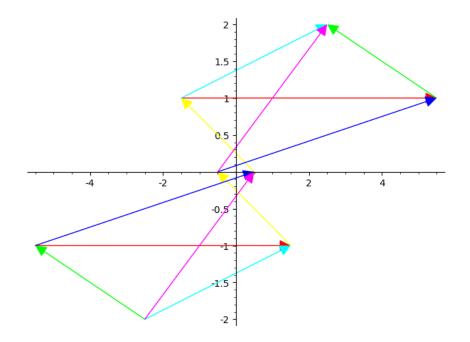
[13, 15, 1, -1]



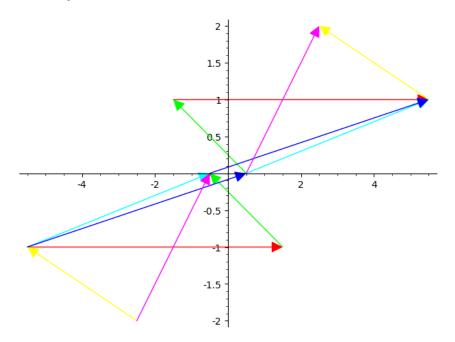
 $[17/2,\,0,\,0,\,0]$ 



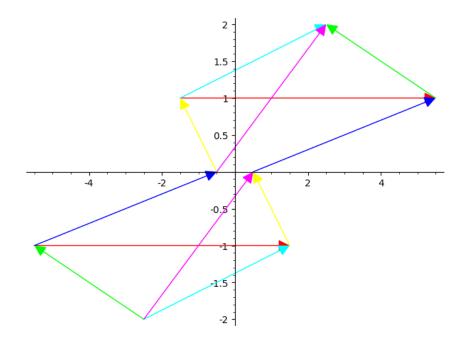
[9, 13, -1, 1]



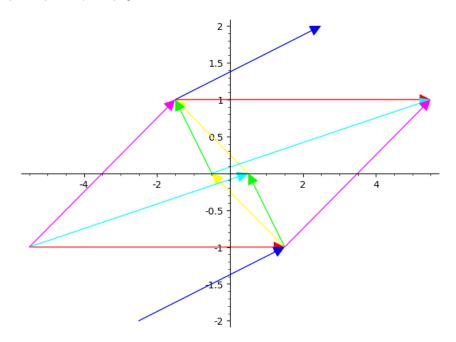
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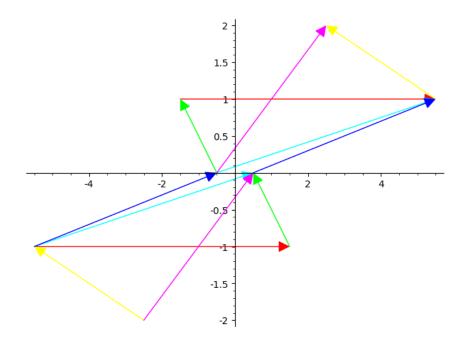
 $[209/2,\,11/2,\,165/2,\,\text{-}11/2]$ 



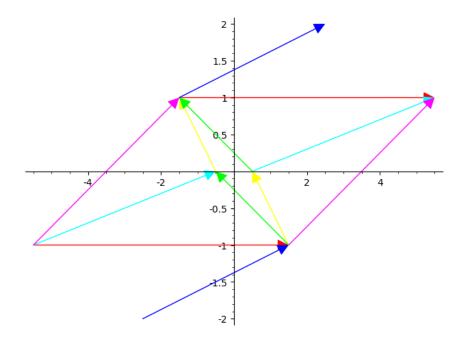
 $[45/2,\, \hbox{-}3/2,\, 39/2,\, 3/2]$ 



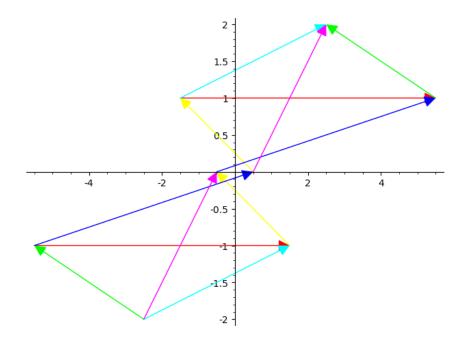
 $[11/2,\,0,\,0,\,0]$ 



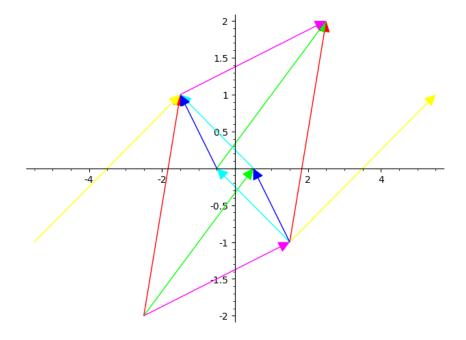
 $[165/2,\, \text{-}11/2,\, 143/2,\, 11/2]$ 



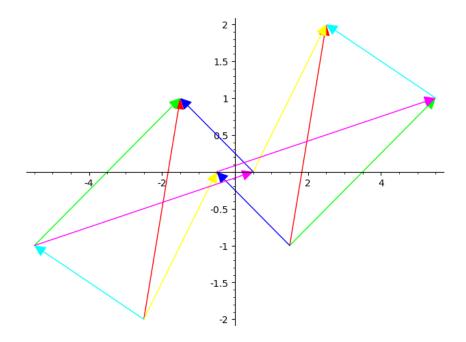
 $[11/2,\,0,\,0,\,0]$ 



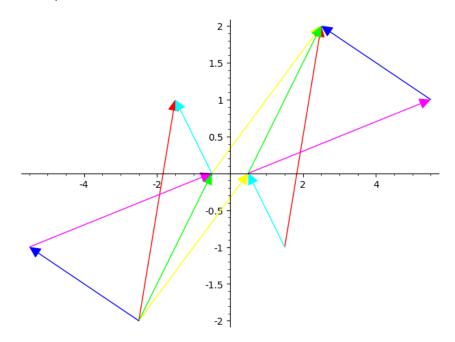
[19, 1, 15, -1]



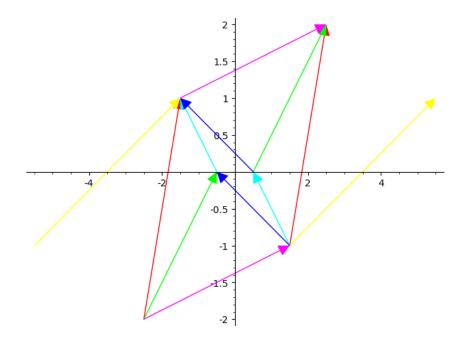
 $[0,\,77/2,\,0,\,0]$ 



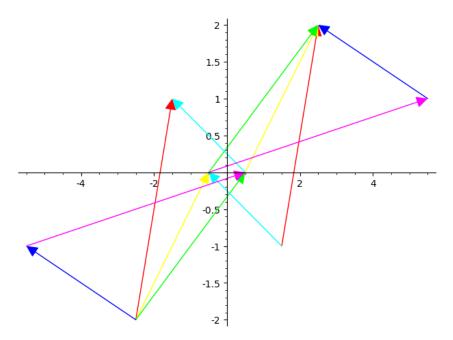
[1, 9, 5, -1]



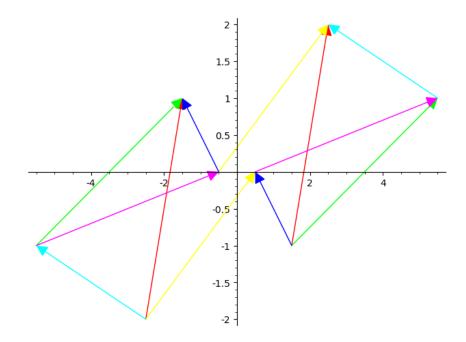
 $[-1/2,\,4,\,3,\,1/2]$ 



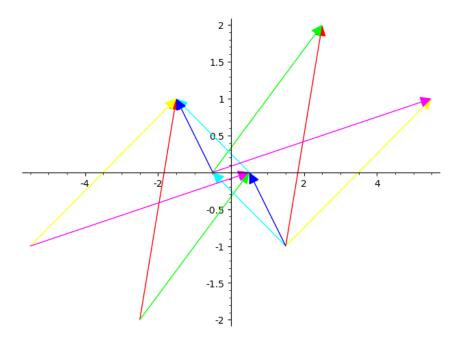
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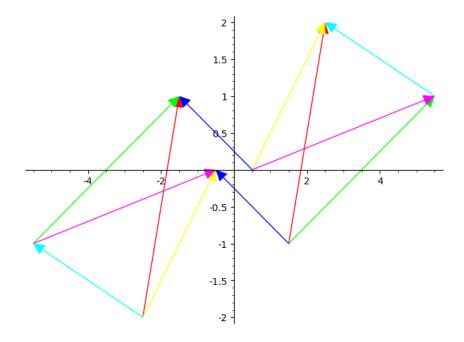
 $[3/2,\,27/2,\,15/2,\,-3/2]$ 



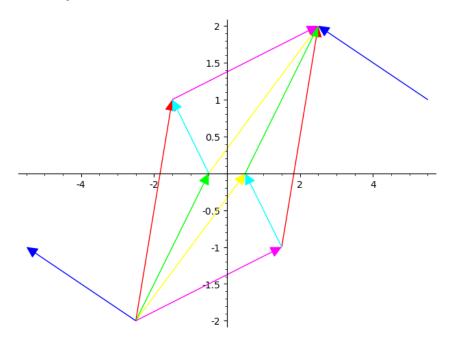
 $[-1/2,\,4,\,3,\,1/2]$ 



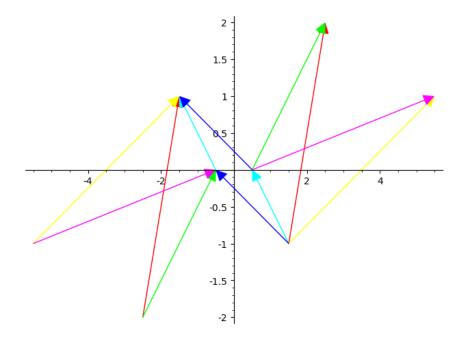
[9, 13, 1, -1]



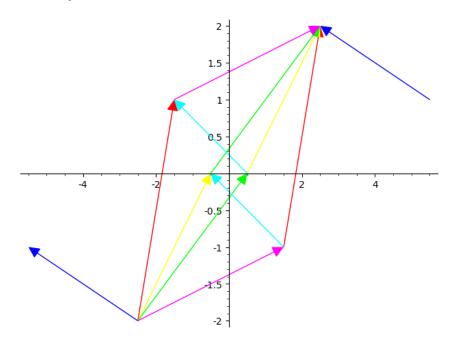
[13, 15, -1, 1]



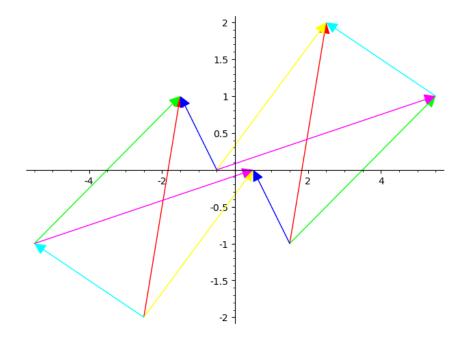
[0, 17, 0, 0]



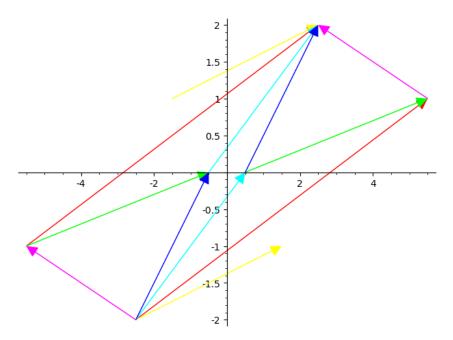
[13, 15, -1, 1]



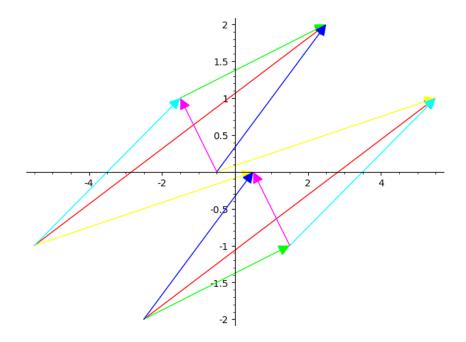
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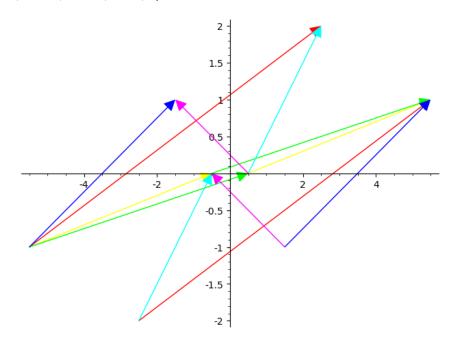
[9, 13, 1, -1]



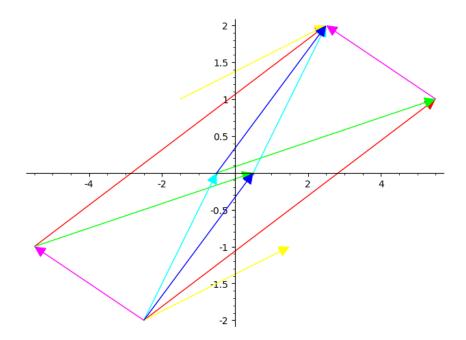
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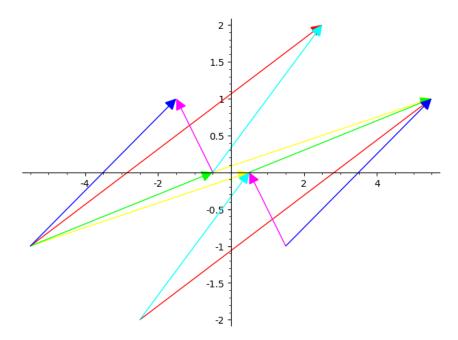
 $[209/2,\, \text{-}11/2,\, 165/2,\, 11/2]$ 



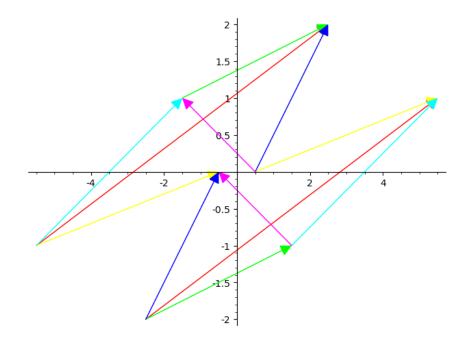
[15, 1, 13, -1]



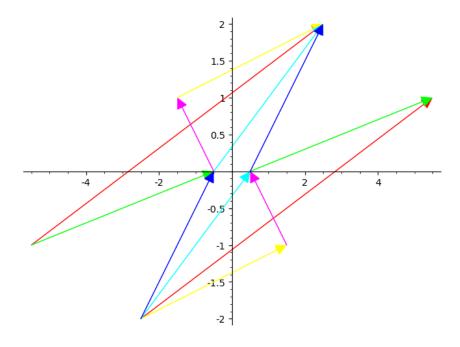
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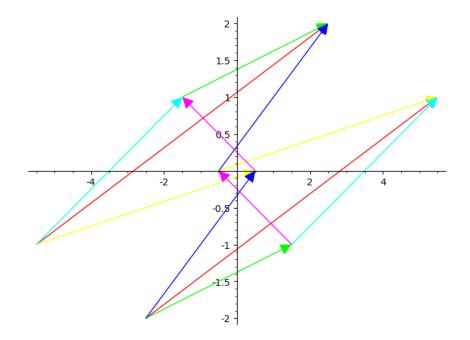
[19/2, -1/2, 15/2, 1/2]



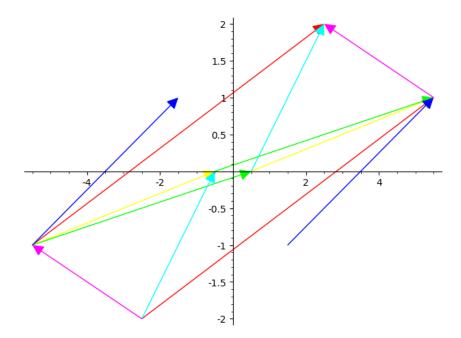
 $[45/2,\,3/2,\,39/2,\,\text{-}3/2]$ 



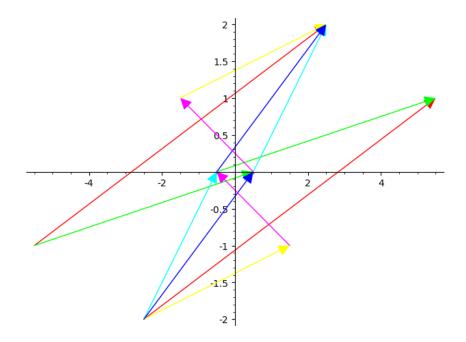
[-1, 9, 5, 1]



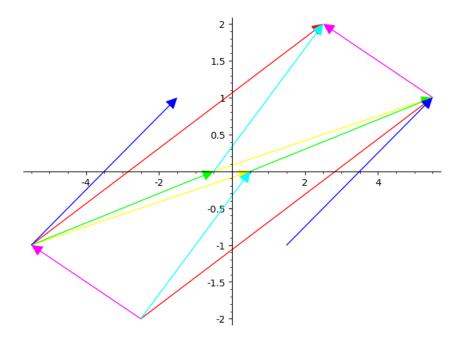
 $[11/2, \, 44, \, 33, \, \text{-}11/2]$ 



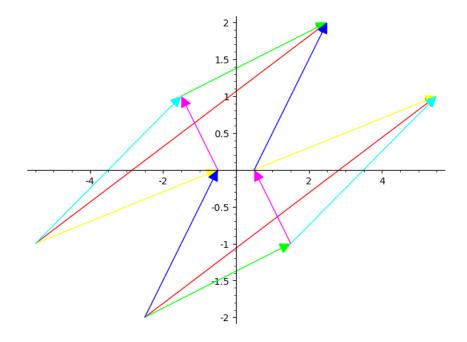
[0, 0, 7, 0]



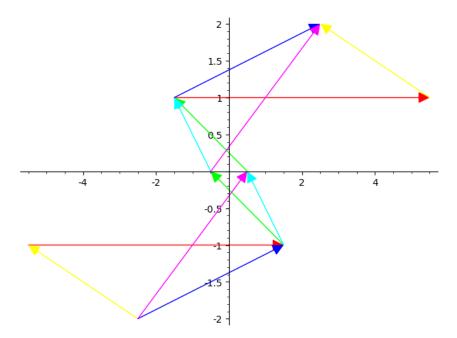
 $[1/2,\,4,\,3,\,$  -1/2]



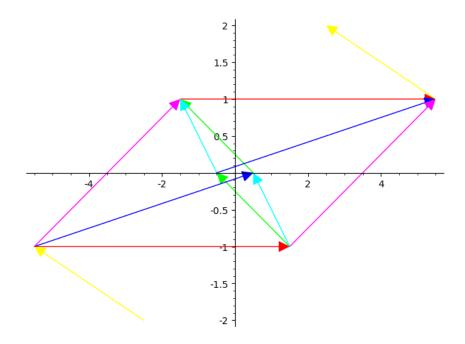
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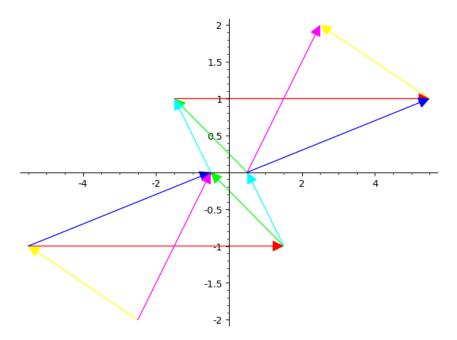
 $[-3/2,\,27/2,\,15/2,\,3/2]$ 



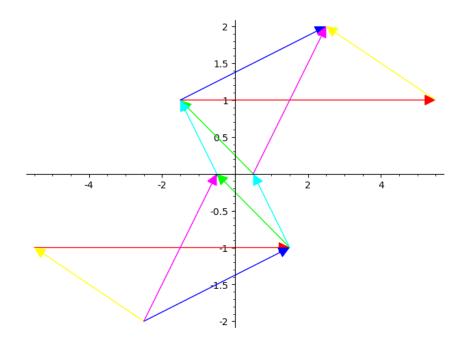
[13, 15, 1, -1]



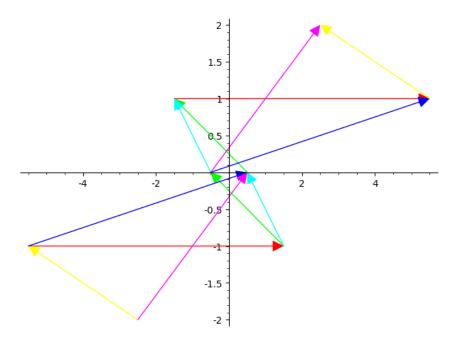
 $[17/2,\,0,\,0,\,0]$ 



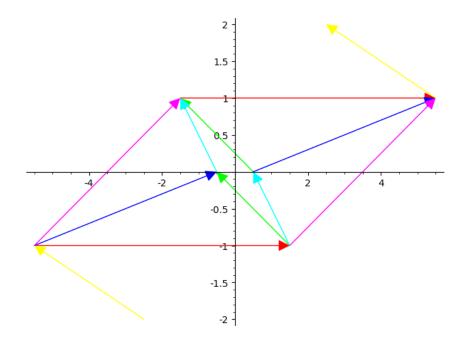
[9, 13, -1, 1]



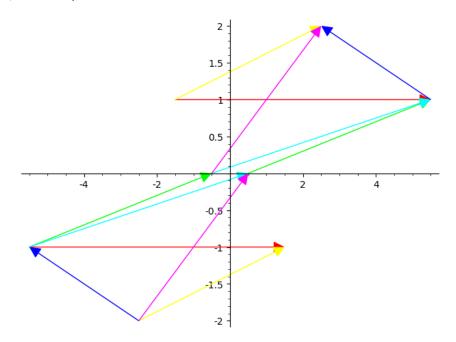
[9, 13, -1, 1]



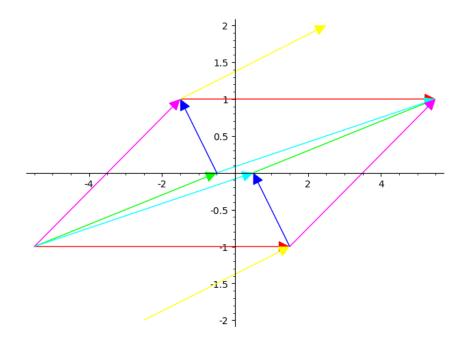
[13, 15, 1, -1]



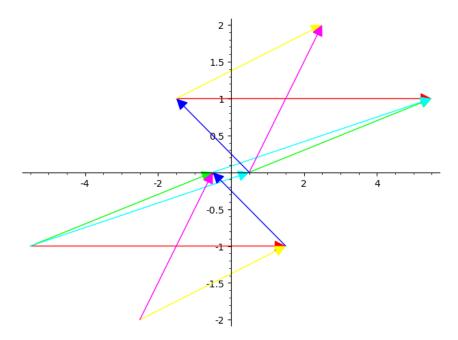
 $[17/2,\,0,\,0,\,0]$ 



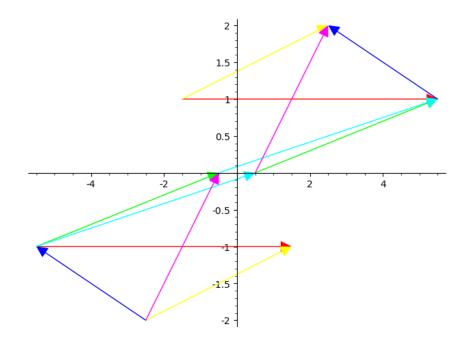
 $[45/2,\, \hbox{-}3/2,\, 39/2,\, 3/2]$ 



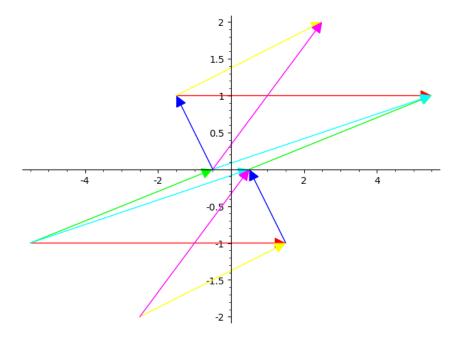
 $[11/2,\,0,\,0,\,0]$ 



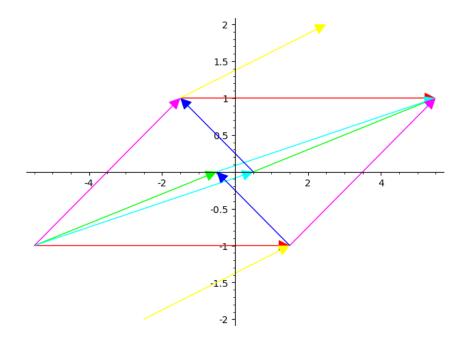
 $[209/2,\,11/2,\,165/2,\,\text{-}11/2]$ 



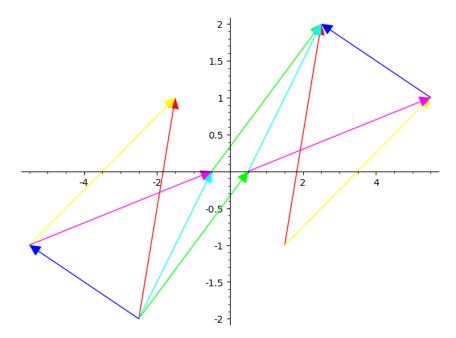
 $[209/2,\,11/2,\,165/2,\,\text{-}11/2]$ 



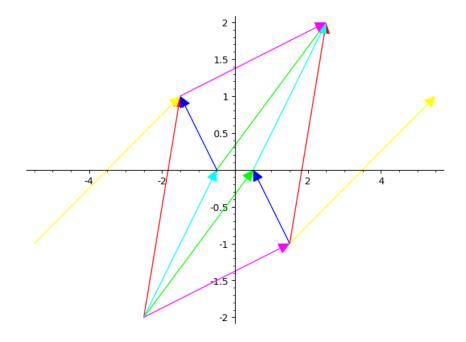
 $[45/2,\, \hbox{-}3/2,\, 39/2,\, 3/2]$ 



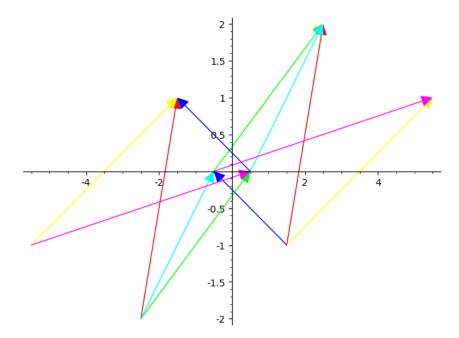
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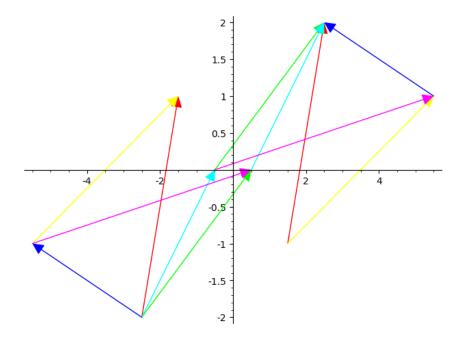
 $[-1/2,\,4,\,3,\,1/2]$ 



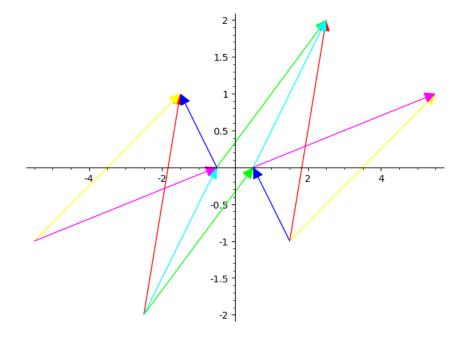
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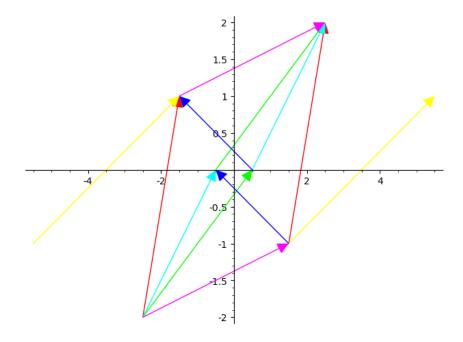
 $[3/2,\,27/2,\,15/2,\,-3/2]$ 



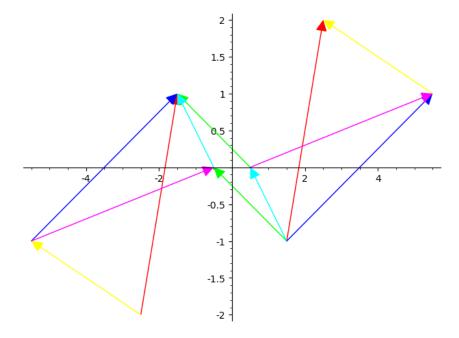
 $[3/2,\,27/2,\,15/2,\,-3/2]$ 



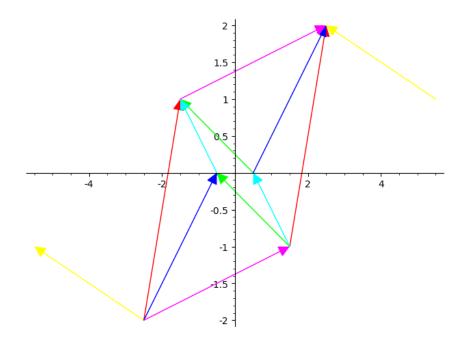
 $[-1/2,\,4,\,3,\,1/2]$ 



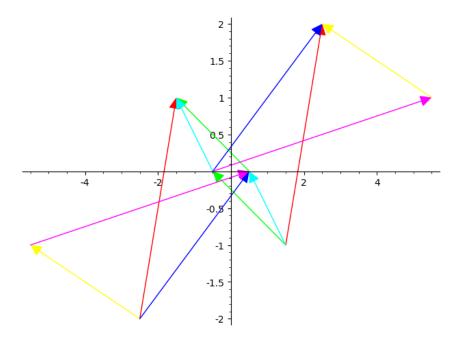
 $[0,\,7/2,\,0,\,0]$ 



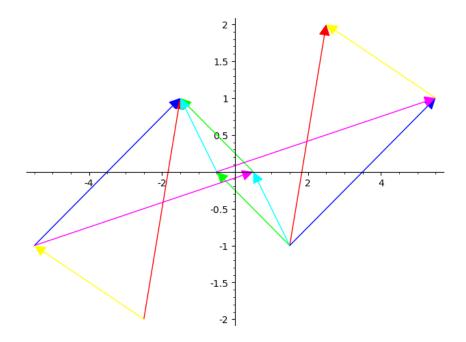
[13, 15, -1, 1]



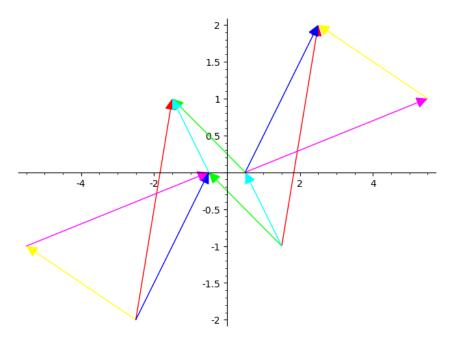
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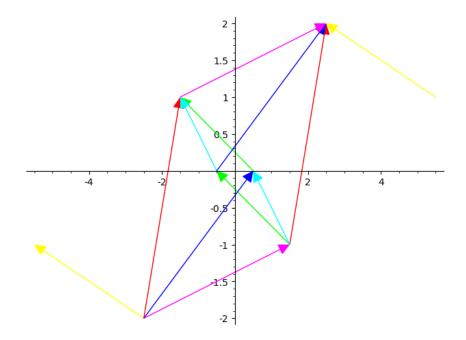
[9, 13, 1, -1]



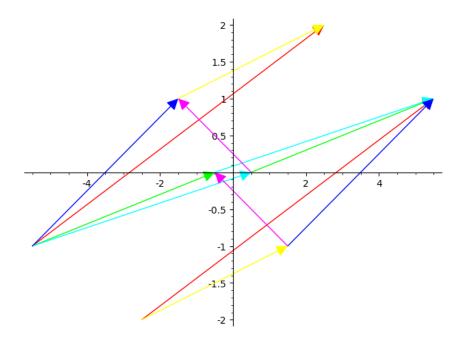
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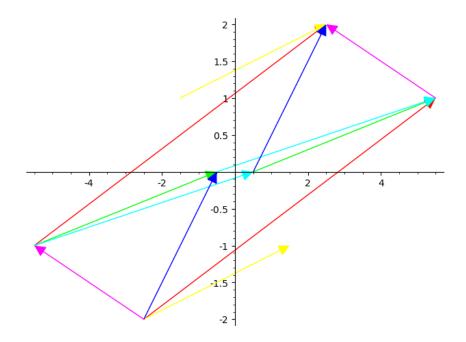
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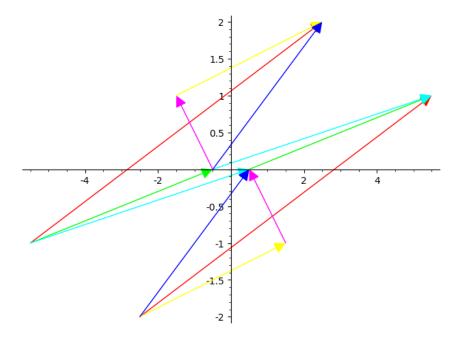
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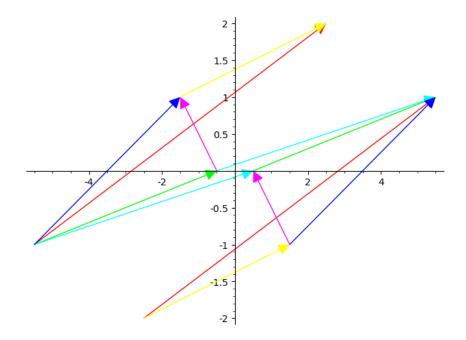
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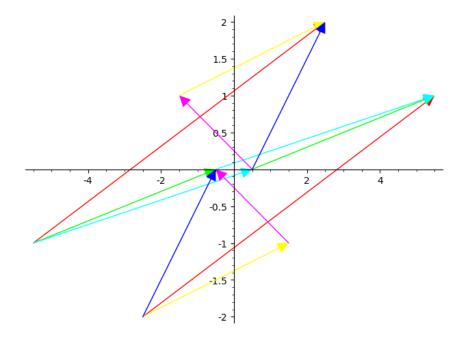
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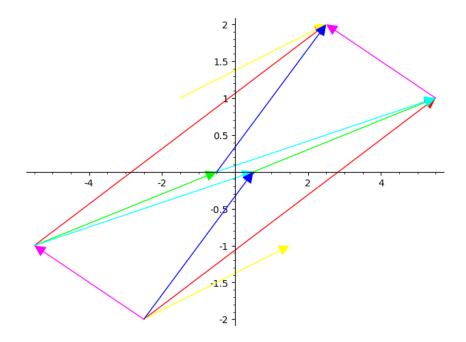
[19, -1, 15, 1]



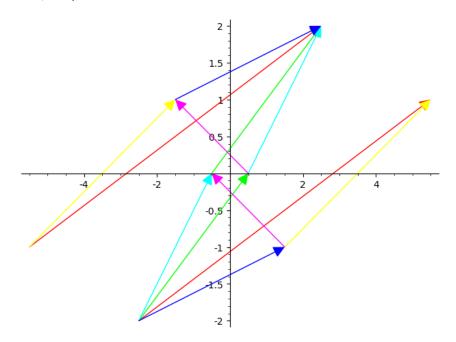
 $[19/2,\, \text{-}1/2,\, 15/2,\, 1/2]$ 



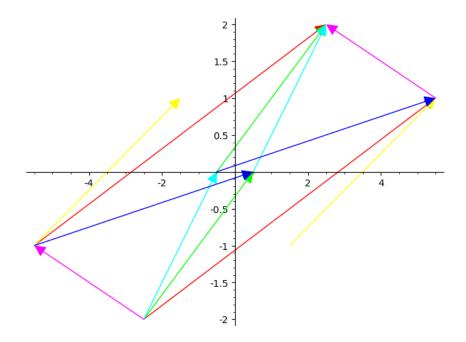
 $[45/2,\,3/2,\,39/2,\,-3/2]$ 



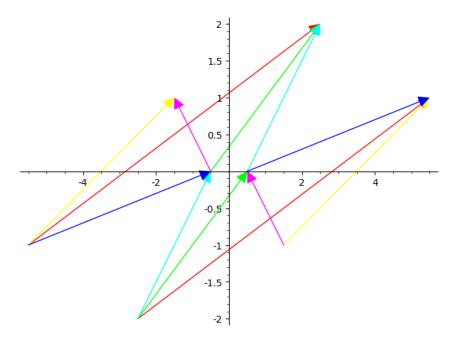
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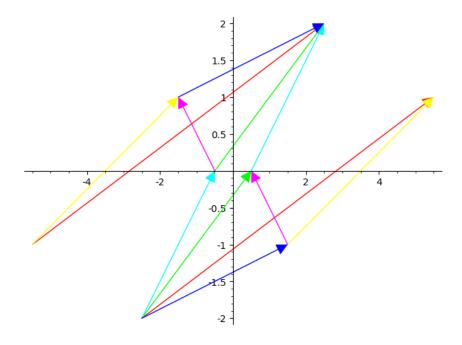
 $[11/2, \, 44, \, 33, \, \text{-}11/2]$ 



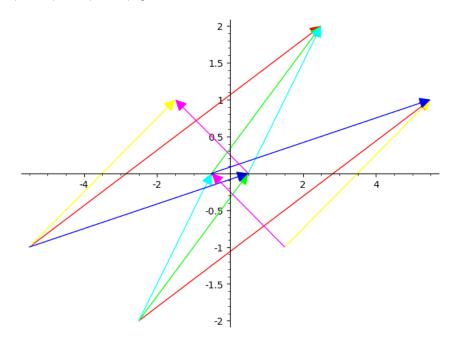
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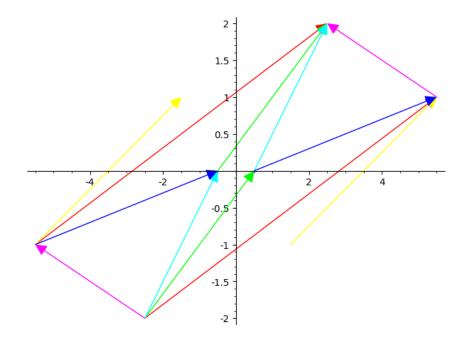
 $[-3/2,\,27/2,\,15/2,\,3/2]$ 



 $[-11/2,\,99/2,\,55/2,\,11/2]$ 



 $[1/2,\,4,\,3,\,$  -1/2]



 $[0,\,0,\,21/2,\,0]$