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for confidence  
for creativity  
for insight

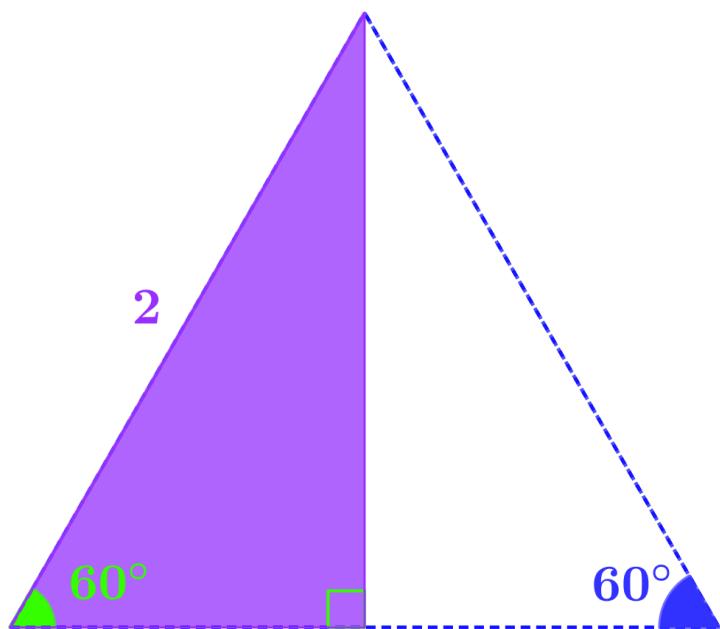
## **Circular functions 1**

**Defining the circular functions**

**sin, cos, tan and the unit circle**

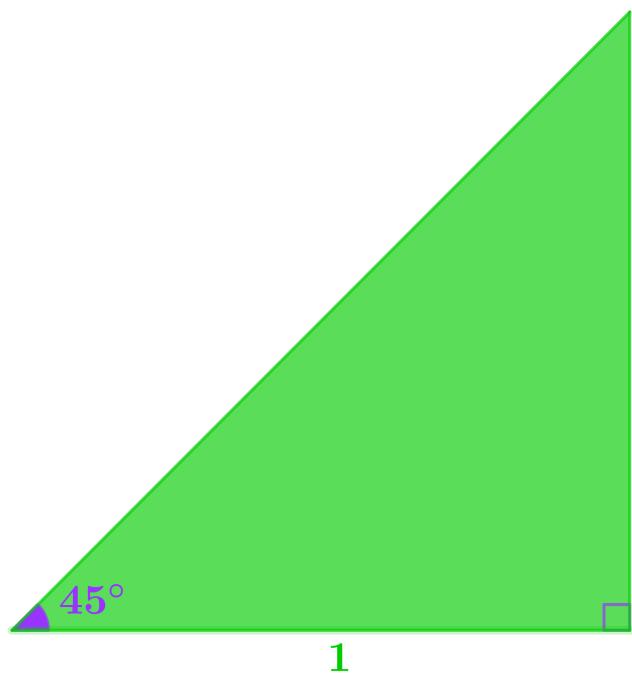
**student version**

Use this diagram to find sin, cos, and tan of  $60^\circ$  and  $30^\circ$ .



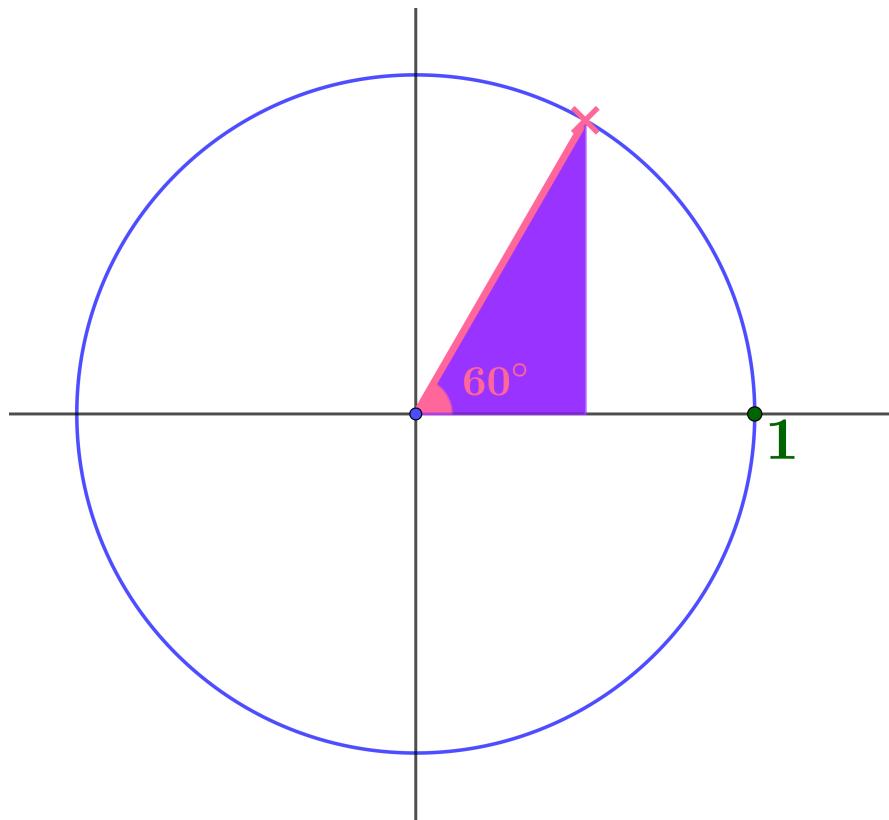
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Use this diagram to find sin, cos, and tan of  $45^\circ$ .



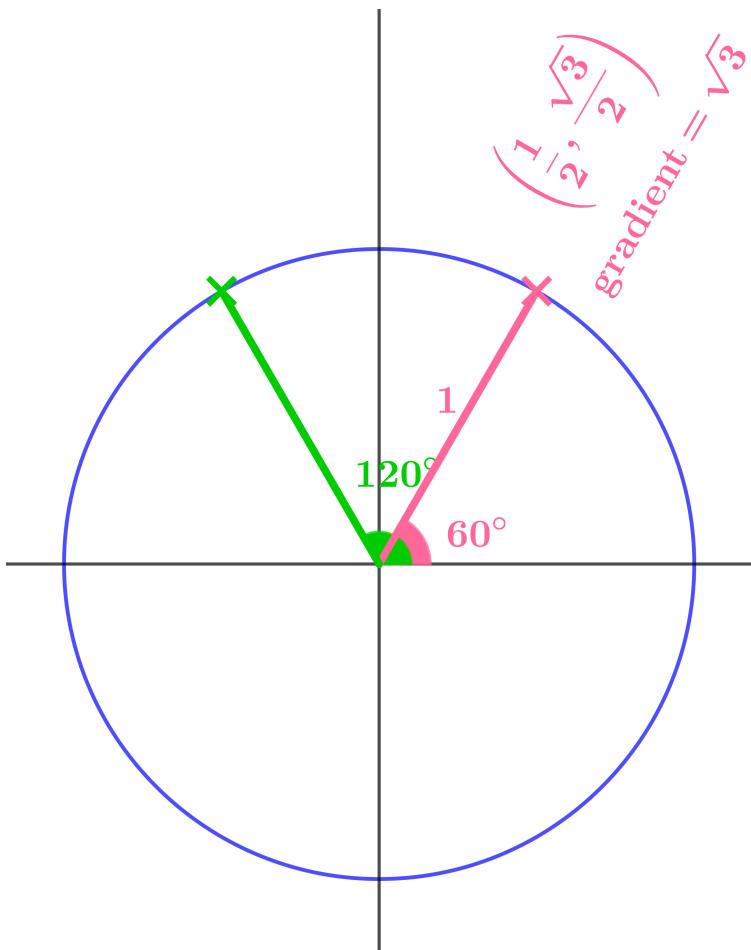
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What are the coordinates of the pink point and the gradient of the pink radius?



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What are the coordinates of the green point and the gradient of the green radius?

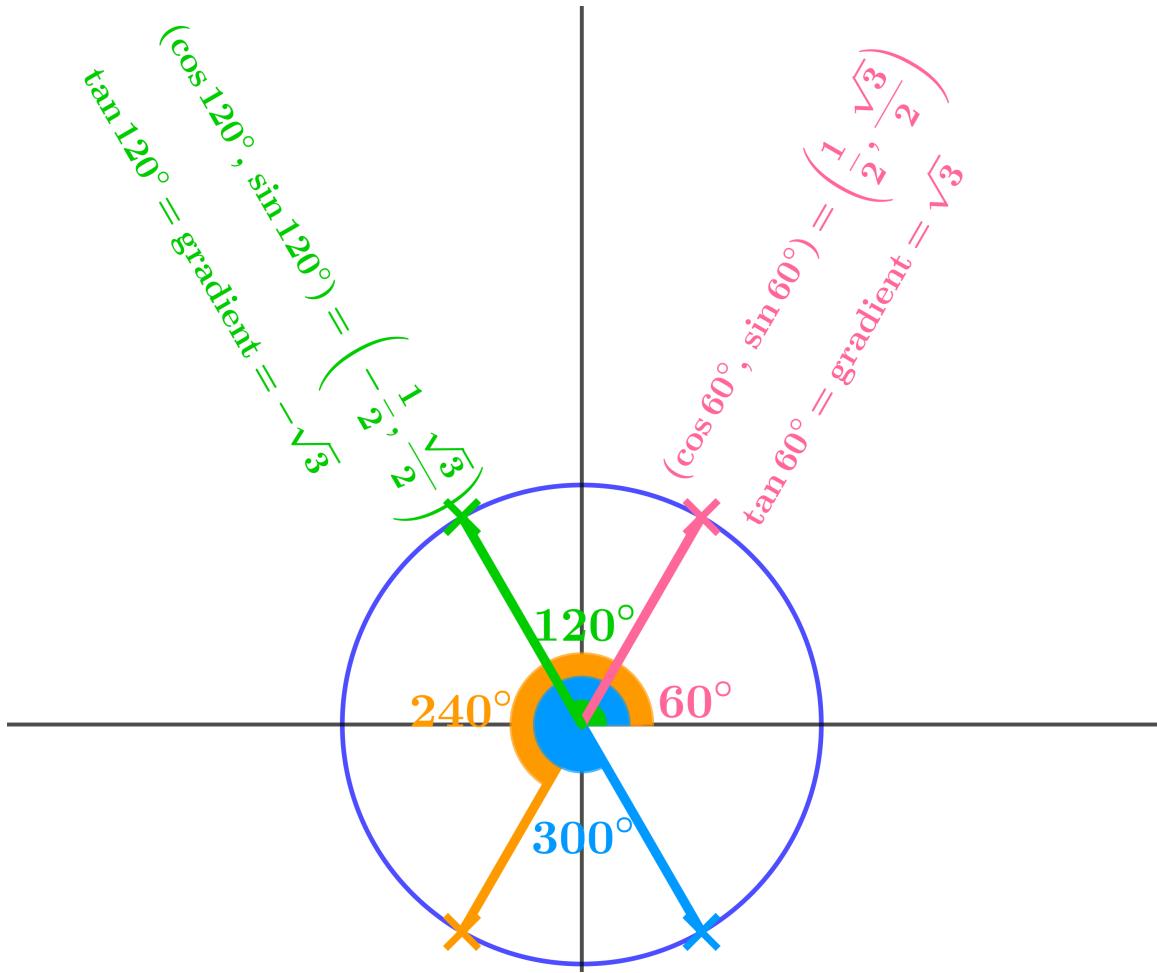


Suggest values for sin, cos, and tan of  $120^\circ$ .



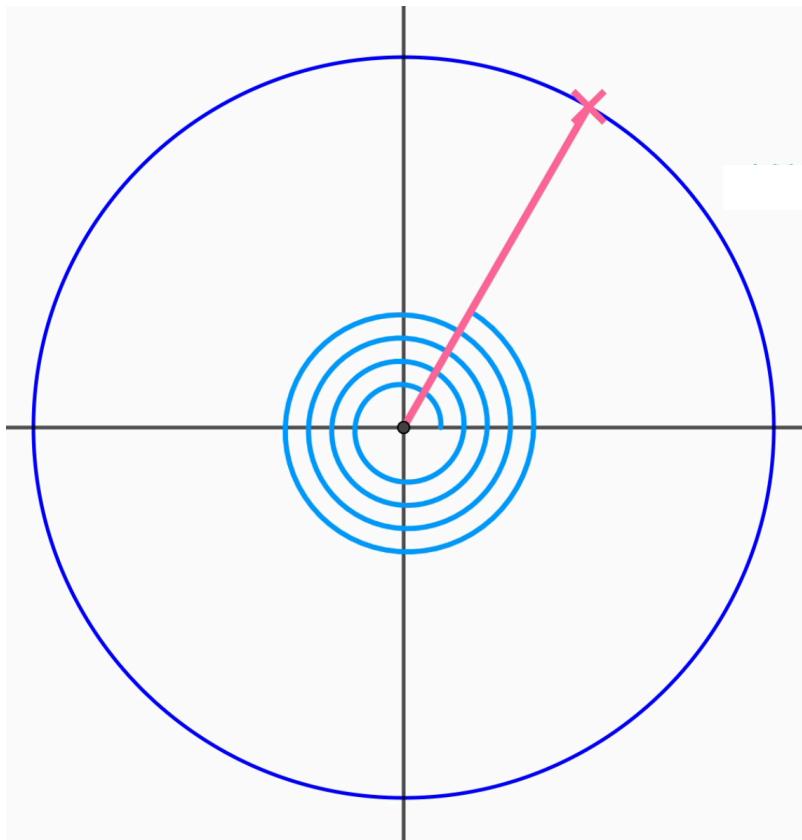
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Suggest values for sin, cos, and tan of  $240^\circ$  and  $300^\circ$ .



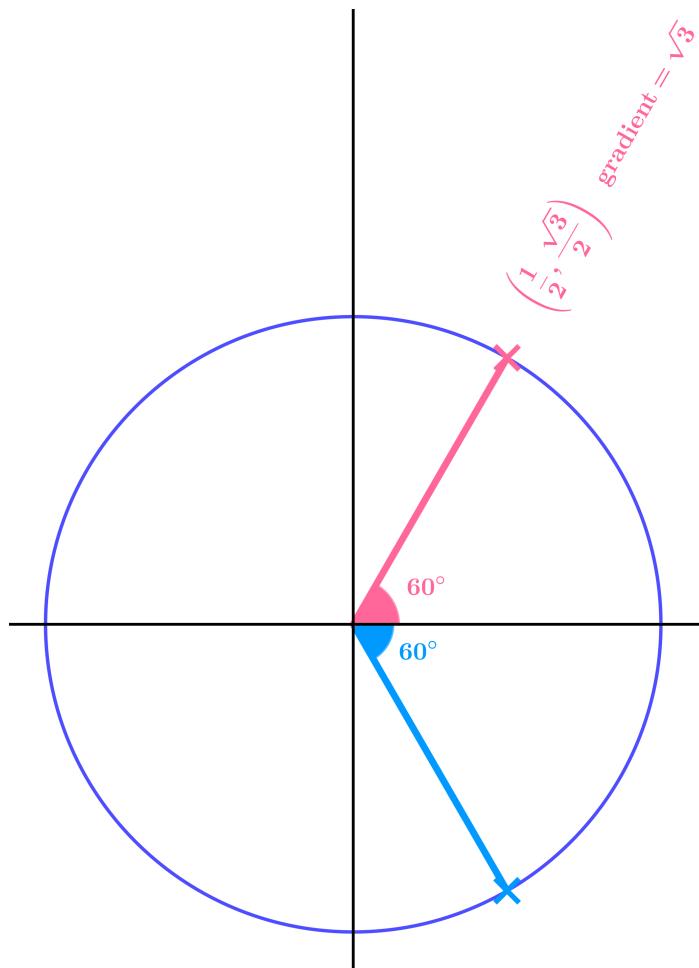
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What are  $\sin$ ,  $\cos$ ,  $\tan$  of  $420^\circ$ ,  $780^\circ$ ,  $1140^\circ$ ,  $1500^\circ$ ?



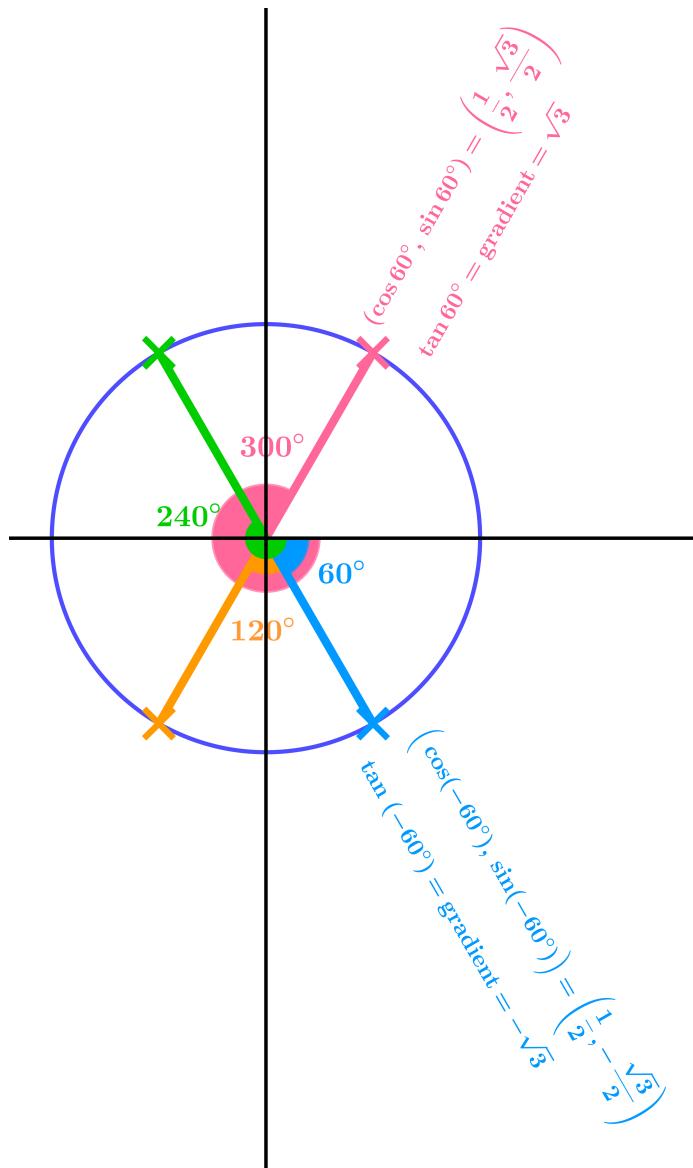
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Suggest values for sin, cos, tan of  $-60^\circ$  ?



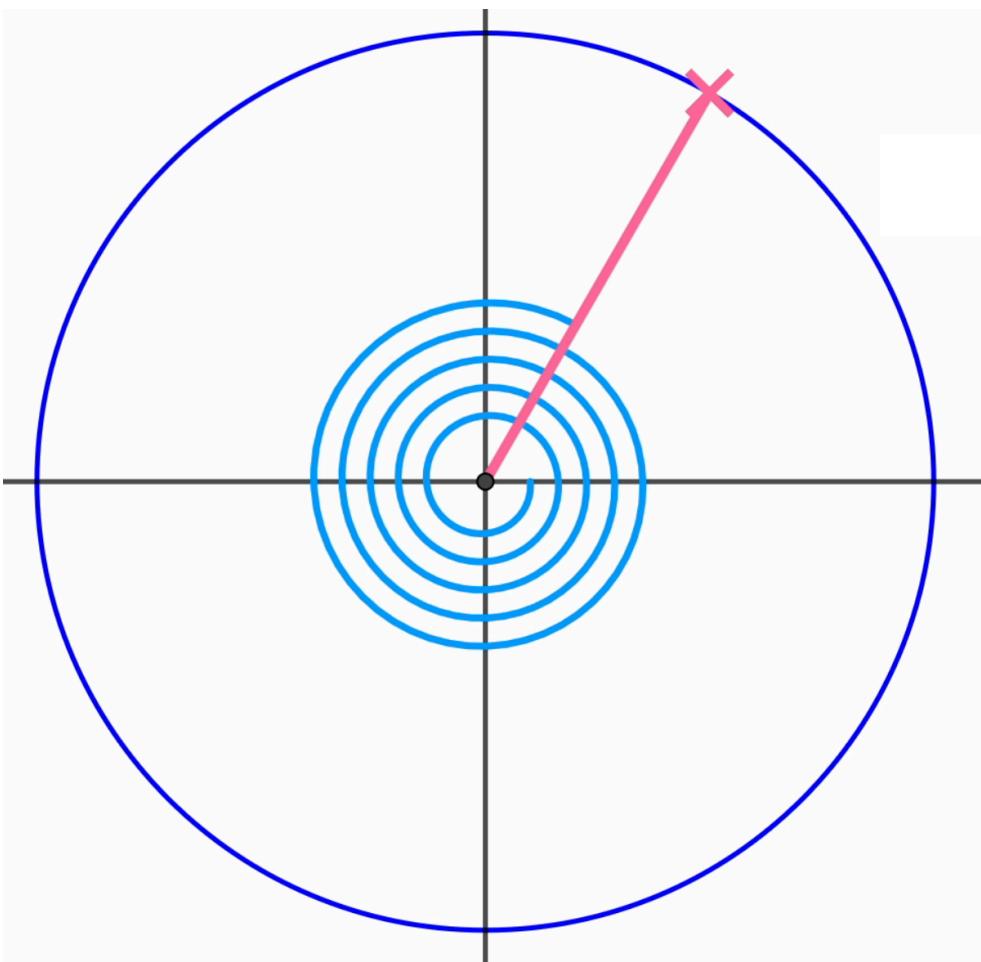
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Suggest values for sin, cos, tan of  $-120^\circ$  –  $240^\circ$  –  $300^\circ$ .

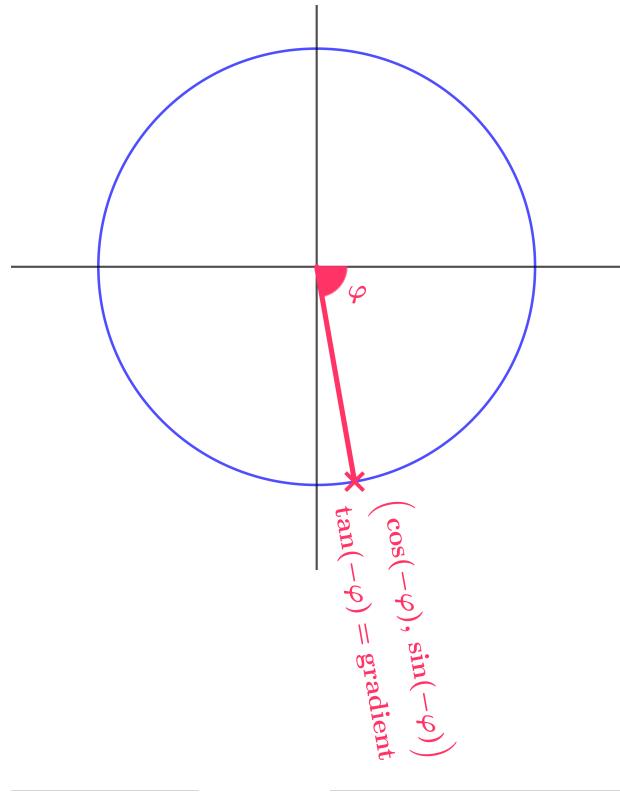
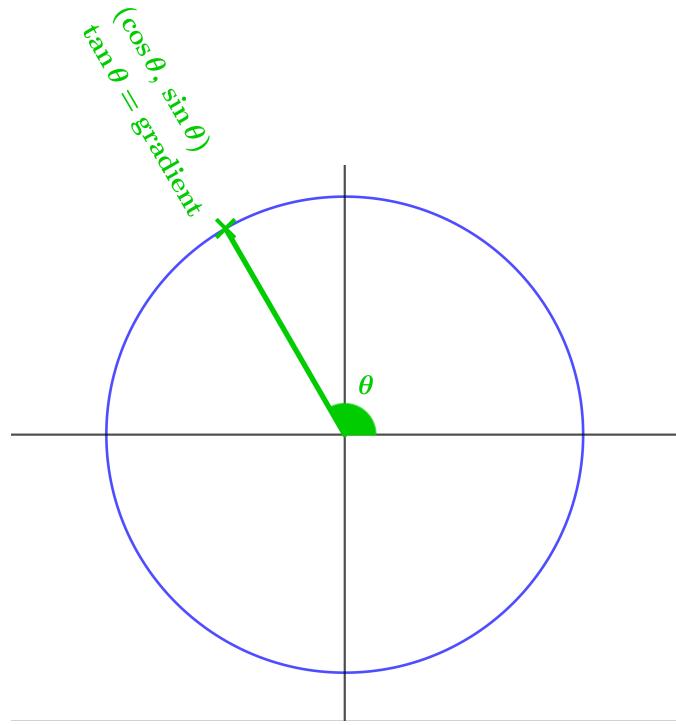


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Suggest values for  $\sin$ ,  $\cos$ ,  $\tan$  of  $-660^\circ$ ,  $-1020^\circ$ ,  $-1380^\circ$ ,  $-1740^\circ$ .

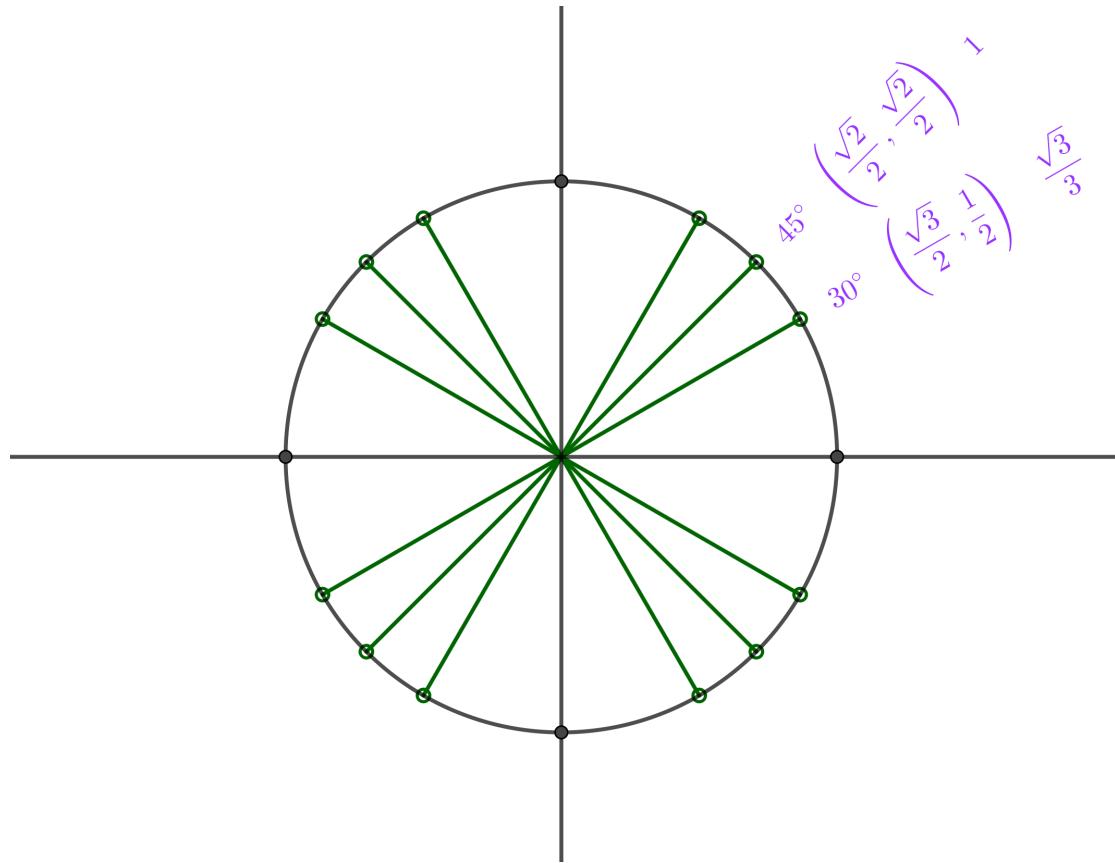


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Complete this diagram.



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