

# Quiz 6

MAT 332  
Fall 2022

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First

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Last

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UTOR id

- What is a  $k$ -connected graph?
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
- Recall that the hypercube  $Q_k$  is the simple graph whose vertices are the  $k$ -tuples with entries in  $\{0, 1\}$  and whose edges are the pairs of  $k$ -tuples that differ in exactly one position. Prove that the hypercube  $Q_3$  is 3-connected (Bonus: prove that  $Q_k$  is  $k$ -connected).