עץ החלטה - תרשים וחישובים

# חישובי ג'יני

X1 <= 5.0:  
- True: (2,5,A), (4,3,A) → value = [2,0]  
- False: (6,4,B), (8,5,B), (10,3,A), (12,4,B) → value = [1,3]  
  
G(True) = 1 - ((2/2)^2 + (0/2)^2) = 0  
G(False) = 1 - ((1/4)^2 + (3/4)^2) = 1 - 0.625 = 0.375  
  
X2 <= 3.5   
- True: (10,3,A) → value = [1,0]  
- False: (6,4,B), (8,5,B), (12,4,B) → value = [0,3]  
  
G(True) = 1 - (1^2 + 0^2) = 0  
G(False) = 1 - ((0/3)^2 + (3/3)^2) = 0

# 2. מבנה עץ החלטה (תרשים)

X1 <= 5.0  
 gini = 0.5  
 samples = 6  
 value = [3,3]  
 class = A  
 / \  
 / \  
 gini = 0.0 X2 <= 3.5  
 samples = 2 gini = 0.375  
 value = [2,0] samples = 4  
 class = A value = [1,3]  
 class = B  
 / \  
 gini = 0.0 gini = 0.0  
 samples = 1 samples = 3  
 value = [1,0] value = [0,3]  
 class = A class = B