✓ **Congratulations! You passed!**
TO PASS 80% or higher

PRACTICE QUIZ • 30 MIN

Week 2 Quiz

Keep Learning

Week 2 Quiz

TOTAL POINTS 10

1. Which decision boundary corresponds to the following decision tree?   **1 / 1 point**   Try again

   In the options, red indicates high risk, blue indicates low risk.
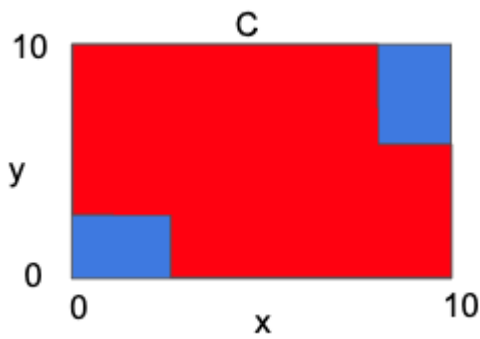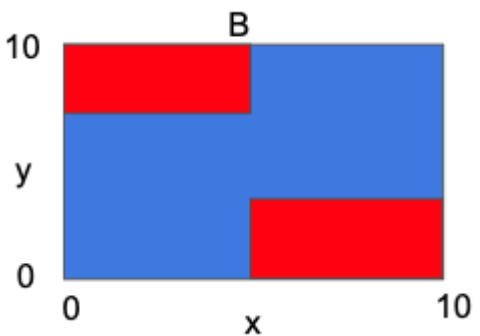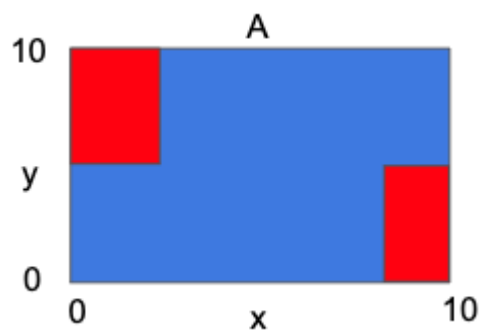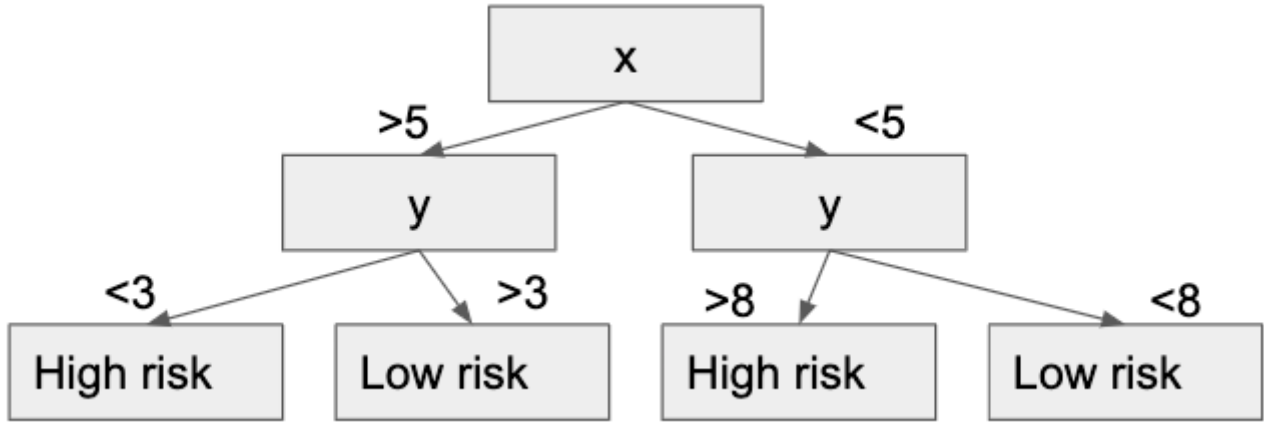
   ✓ **Receive grade**
   TO PASS 80% or higher

   Grade
   100%

   View Feedback

   We keep your highest score

   ○

   ◉

   ○

   ✓ **Correct**
   One way to approach this is to work your way back up from the leaves to see the regions that are classified as high risk. Doing this, we see that one high risk area is where x > 5 and y > 3, and where x < 5 and y > 8. This corresponds to the two rectangles shown here.

2. True or False: A tree of depth 1 is more expressive than a classical linear model.   **1 / 1 point**

   ○ True

   ◉ False

   ✓ **Correct**
   Most of the time, a tree has a more flexible decision boundary. However, a tree of depth one can just threshold on one of the features, which a linear model can do as well by making the coefficients of all other features zero. The linear model can also get non-axis aligned boundaries by using combinations of covariates, so in this case, the linear model has a larger hypothesis space.

3. One way to aggregate predictions from multiple trees is by a majority vote. Using this aggregation rule, select the prediction of the following trees on the data point (x=4, y=7, z=2):   **1 / 1 point**