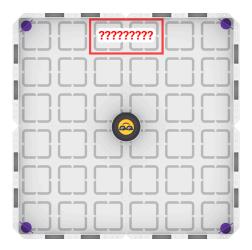
✓E×*AIM* Activity



Corner Code

Crack the hidden passcode! Code the AIM Coding Robot to scan each corner of the field and combine the identified AprilTag IDs to decode the number.

Step by Step

- 1. Have a partner choose 4 digits from the numbers 0–4 to create a secret 4-digit passcode.
 - Write the selected 4-digit passcode in the passcode zone in the top area of the field and cover it with a piece of paper or tape (as shown in the red question mark area above).
- 2. Have your partner set up the field, as shown in the image above.
 - Place the robot at the center of the field, facing the top wall.
 - Place the AprilTag IDs that match each digit of the passcode at the corners of the field.
 - First digit in the top-right
 - Second digit at the bottom-right
 - Third at the bottom-left
 - Fourth at the top-left.
- 3. Code the robot to use Al Vision to detect the AprilTag IDs to reveal the 4-digit passcode. The robot should:
 - Turn toward each AprilTag ID.
 - Identify the AprilTag ID.
 - Display all 4 IDs in order as the 4-digit passcode on the robot's screen.
 - Reveal the passcode on the field. Did your robot successfully crack the code?
- 4. Continue building and testing your project until you have printed the passcode correctly!

'LEVEL UP'

 5-Digit Passcode – Reset your passcode using all five of the AprilTag IDs. Remix your project to detect and print the new 5-digit passcode on the screen.

Pro Tips

- Use the else if block to check each AprilTag ID in order.
- Make sure to check for <u>all</u> AprilTag IDs with the **get object data** block.



Standards: CSTA 1B-DA-07: Use data to highlight or propose cause-and-effect relationships, predict outcomes, or communicate an idea