Basketball Game | **Mini Project 1: Draw the Background**

In this first mini-project, you'll import or create a background for your game. You will also set up the screen dimensions.

Objectives:

- Download or draw the background image
- Use TI-Connect to import the background
- Display the background using code

The Basketball Project Overview:

After completing a series of 8 mini-projects, you will have a basketball game similar to the one on the right. The code for projects 1 -4 will be imported into project 5. Projects 6-8 will build upon project 5.

Mini-Project order:

1. **Draw the Background**
2. Draw the Net
3. Power Gauge
4. Angle Gauge
5. Merge the Projects and Code the Arrow Keys
6. Toss the Ball
7. The Game
8. Win the Trophy

Teacher Tip:
If students are unfamiliar with the numeric values of the keys on the keyboard and how to use their values, Mini-project 1 in the Maze Project "Detect which keys are pressed" might be helpful. It teaches students how to use a While statement to continuously check for keypress values. It also lets students explore and create a map of key numbers for the keyboard. If students don't have this knowledge, the code will be provided in the basketball project steps to overcome the skill deficit.

1. Download the basketball image or draw your own using drawing software.

Connect your calculator to your computer and run the TI-Connect CE software program.

Open the calculator explorer workspace.

Import the drawing as IMAGE8

Create a new program named BACKGRND

Teacher Tip:
Students can create their own background using a drawing untility. If students draw a background, some of the measurment numbers for the toss will need to be adjusted in mini-project 6 Toss the Ball and 7: The Game.

2. You need to:
   store all your graph settings so they can be restored
   turn angle mode to degree
   turn functions off
   turn plots off
   set your x minimum and x maximum
   set your y minimum and y maximum

   Type the following code
   :StoreGDB 1
   :Degree
   :FnOff
   :PlotsOff
   :1→Xmin
   :265 →Xmax
   :1 →Ymin
   :165 →Ymax

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StoreGDB is located in DRAW under STO
Degree is located in MODE
FnOff is located in Vars – Y-Vars – On/Off
PlotsOff is located in statPlot
Xmin, Xmax, Ymin, Ymax are located in Vars – Window

3. You need to:
   set the background to your image
   display graph

   Type the following code
   :BackgroundOn Image 8
   :DispGraph

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BackgroundOn is located in Draw – Background
DispGraph is located in PRGM – I/O

4. Execute your program.

   Makes sure the display looks similar to the one on the right.

5. After executing the program you should reset your graph settings and turn off the background image. If you added the commands now, they'll execute immediately and override your background. Therefore, you'll add a pause. The pause will the execution of the following lines until the user presses the enter key. Pause is located in PRGM. Type the following code:

   :Pause
   :BackgroundOff
   :RecallGDB 1

   Execute the program. After pressing the **enter** key does the background turn off?

Teacher Tip:

Code: