Szinusz függvény ábrázolása 2D-ben

Az alábbi rövid példa egy szinusz függvény ábrázolását mutatja.

```
#include <raylib.h>
#include <math.h>

int main() {
    // Initialization
    const int screenWidth = 800;
    const int screenHeight = 450;
    InitWindow(screenWidth, screenHeight, "Sinus Function Plot - raylib");

    SetTargetFPS(60); // Set FPS

    while (!WindowShouldClose()) { // Main game loop
        // Update

        // Draw
        BeginDrawing();

            ClearBackground(RAYWHITE); // Clear the background

            // Draw the axes
            Vector2 origin = { (float)screenWidth/2, (float)screenHeight/2
};
            DrawLine(origin.x, 0, origin.x, screenHeight, BLACK); // Y-axis
            DrawLine(0, origin.y, screenWidth, origin.y, BLACK); // X-axis

            // Draw the sine function
            for(int i = -screenWidth/2; i < screenWidth/2; i++) {
                // Calculating points
                float x1 = (float)i;
                float y1 = sinf(x1 * DEG2RAD) * 100; // Scale the sine wave
                float x2 = x1 + 1;
                float y2 = sinf(x2 * DEG2RAD) * 100; // Scale the sine wave

                // Transform points to screen space
                x1 += origin.x;
                y1 = origin.y - y1; // Invert y1 to match screen coordinates
                x2 += origin.x;
                y2 = origin.y - y2; // Invert y2 to match screen coordinates

                // Draw line segment
                DrawLine(x1, y1, x2, y2, BLUE);
            }
```

```
            DrawText("Sinus Function Plot", 10, 10, 20, BLACK); // Title
            DrawText("X-Axis", screenWidth - 50, origin.y + 10, 10, BLACK);
// X-axis label
            DrawText("Y-Axis", origin.x + 10, 10, 10, BLACK); // Y-axis
label

        EndDrawing();
    }

    CloseWindow();

    return 0;
}
```

A következő példa egy kétváltozós függvényt **sinf(sqrtf(x*x + y*y))** térben ábrázol

```
#include <raylib.h>
#include <math.h>

int main() {
    // Initialization
    const int screenWidth = 800;
    const int screenHeight = 800;
    InitWindow(screenWidth, screenHeight, "3D Sinus Function Plot -
raylib");

    // Define the camera
    Camera camera = { 0 };
    camera.position = (Vector3){ 20.0f, 20.0f, 20.0f };
    camera.target = (Vector3){ 0.0f, 0.0f, 0.0f };
    camera.up = (Vector3){ 0.0f, 1.0f, 0.0f };
    camera.fovy = 45.0f;

    SetTargetFPS(60);

    while (!WindowShouldClose()) {
        BeginDrawing();
            ClearBackground(RAYWHITE);
            BeginMode3D(camera);

                for (float y = -8.0f; y < 8.0f; y += 0.2f) {
                    for (float x = -8.0f; x < 8.0f; x += 0.2f) {
                        float z = sinf(sqrtf(x*x + y*y)) * 2.0f; //
Amplitude increase for better visualization
                        Vector3 pos = { x, z, y };
                        float colorIntensity = (z + 2.0f) / 4.0f; //
```

```
Normalize z value to [0, 1] for color
                        Color color = ColorFromHSV(200.0f * colorIntensity,
0.8f, 0.8f);
                        DrawCubeV(pos, (Vector3){0.2f, 0.1f, 0.2f}, color);
                    }
                }
                DrawGrid(20, 1.0f);
            EndMode3D();
            DrawFPS(10, 10);
        EndDrawing();
    }
    CloseWindow();
    return 0;
}
```