Math Path

Minor game design document

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Introduction:

Math Path is an educational puzzle where the player has to work on remembering certain patterns and solve math cues.

Title:

Math Path

Genre:

Educational Puzzle game

Target audience:

Everyone from 12 and up, especially students and people interested in math and would like a mental challenge.

Deployment platform:

PC and Mac, made in Unreal Engine 4

(Could be viable for mobile devices where user touches instead of moving the character)

Unreal Engine Template:

Blueprint Third Person

Character:

There is only one character in Math Path which is a plain looking grey man controlled from a third person perspective, he does not have any kind of personality.

Gameplay summary:

The goal for this game is to remember the path displayed before the level start and replicate it by walking onto the correct golden tiles afterwards. As an extra challenge that adds math to this game each tile has a certain number or math function (add, subtract, divide and multiply) which adds up to the end of the level (the last tile) which is an equal sign (=) for every level. The player has to choose from 3 different result and walk onto the tile with the right number for the calculation. There are 5 different modes to select from: Add, Subtract, Multiply, Divide and Mixed (can be mix of the other 4). The length and difficulty of each level ramps up the further the player gets into the level for that chosen game mode.

User Interface:

Simple menu interface (Main Menu, Game Over, Level Complete and Pause Menu) with plain/non-textured buttons. Each level have a HUD that says «Press P to pause» and has a counter (2/19 for example) that shows how many tiles you have lit up of the total for that particular level.

Control Scheme:

Since PC and Mac is the release platform the controls are: typical W-A-S-D to move and rotate the camera by moving the mouse. Optionally the camera could autoturn to be behind the player at all times.

(If developing for mobile platforms, tapping the tiles to activate them would be added.)

Visual style guide: