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| --- | --- | --- | --- | --- | --- |
|  | **Level** | | | | |
| **R** | **1** | **2** | **3** | **4** |
| **Understanding of nested loops: setting ranges, updating formulas, using the looping variable** | No nested loops attempted | Limited understanding of nested loops | Some understanding of nested loops | Good understanding of nested loops | Thorough understanding of nested loops |
| **Understanding of computer graphics: rectangles, ovals, lines and text** | No computer graphics attempted | Limited understanding of computer graphics | Creates some of the basic graphical types, but with frequent errors | Creates all of the basic graphical types with mostly correct parameters | Creates all of the basic graphical types with correct parameters |
| **Understanding of animations: creating the next frame, deleting and sleeping** | No animations attempted (Problems 3  and 4) | Limited understanding of animations | Some understanding of animations | Good understanding of animations | Thorough understanding of animations |
| **Ability to use variables and derive formulas for creating more sophisiticated computer graphics (e.g. fraction wall)** | No formulas attempted | Attempts to use variables and formulas, but not effectively. | Uses some variables and derives some formulas, but often not sufficient for the task | Uses mostly appropriate variables and derives mostly accurate formulas | Uses appropriate variables and derives accurate formulas |
| **Ability to design algorithms to solve problems** | No algorithms attempted | Attempts to design algorithms, but not effectively. | Designs algorithms but with numerous errors | Designs mostly effective algorithms with some errors | Designs highly effective algorithms with very few errors |