1. Yes, it uses relative error
2. Code has been changed in the source file.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Value** | **Amount error** | | **Relative error** | |
| **Square root** | **Loops** | **Square root** | **Loops** |
| 0.25 | 0.499756 | 10 | 0.500122 | 11 |
| 5000000000000 | 2236067.9776895183 | 53 | 2236339.3322949705 | 32 |
| 5000000 | 2236.0683762 | 33 | 2236.1737320 | 22 |
| 5 | 2.2354 | 12 | 2.2363 | 11 |
| 0.005 | 0.070103 | 10 | 0.070771 | 14 |
| 0.000005 | 0.0029347 | 10 | 0.0022347 | 19 |

1. When calculating the square roots of small numbers (less than 1), relative error leads to more accurate answers.
2. When calculating the square roots of large number, amount error leads to more accurate answers
3. When we use amount error, the precision means the maximum value of the error. When we use relative error, the precision means the maximum value of error/estimate value.