LB – 08

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| **1** | | | **2** | | |
| **function** f1(x:real): real;  **begin**  result := x \*\* 4 + 3 \* x - 20  **end**;  **function** f1\_(x:real): real;  **begin**  result := 4 \* x \*\* 3 + 3  **end**;  **function** f1\_\_(x:real): real;  **begin**  result := 12 \* x \*\* 2  **end**;  **function** g1(x: real): real;  **begin**  result := (20 - 3 \* x) \*\* (1 / 4)  **end**; | | | **function** f2(x:real): real;  **begin**  result := exp(x) + x - 2  **end**;  **function** f2\_(x:real): real;  **begin**  result := exp(x) + 1  **end**;  **function** f2\_\_(x:real): real;  **begin**  result := exp(x)  **end**;  **function** g2(x: real): real;  **begin**  result := ln(2 - x)  **end**; | | |
| **3** | | | **4** | | |
| **function** f3(x:real): real;  **begin**  result := ln(x) + x  **end**;  **function** f3\_(x:real): real;  **begin**  result := 1 / x + 1  **end**;  **function** f3\_\_(x:real): real;  **begin**  result := -1 \* 1 / x \*\* 2  **end**;  **function** g3(x: real): real;  **begin**  result := exp(-x)  **end**; | | | **function** f4(x:real): real;  **begin**  result := 2 \* x - exp(-0.1 \* x)  **end**;  **function** f4\_(x:real): real;  **begin**  result := 2 - exp(-0.1 \* x) \* (-0.1)  **end**;  **function** f4\_\_(x:real): real;  **begin**  result := -exp(-0.1 \* x) \* (-0.1) \*\* 2  **end**;  **function** g4(x: real): real;  **begin**  result := exp(-0.1 \* x) / 2  **end**; | | |
| 1. | Half Division:  1.94140625 | Iterations:  1.94037733840934 | | Newton:  1.94047935224908 |
| 2. | Half Division:  0.44287109375 | Iterations: 0.442509950010955 | | Newton:  0.442854401004033 |
| 3. | Half Division: 0.567146301269531 | Iterations: 0.567147746330625 | | Newton:  0.567143290409784 |
| 4. | Half Division: 0.476737976074219 | Iterations: 0.476721637710739 | | Newton:  0.476723086001294 |