**11. osztály, Jánosi Líceum, Algebra**

**Név\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_\_\_\_\_\_\_osztályos tanuló**

**Ellenőrző dolgozat. Téma : Derivált**

**І változat**

(1 – 3 feladаt: 1 pont

***1. Határozzuk meg a függvény deriváltját***  ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| А | B | C | D | E |
|  |  |  |  |  |

***2. Határozzuk meg az függvény deriváltjának értékét az х0 = 4 pontban.***

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|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| А | B | C | D | E |
| 1,25 | 1,5 | 4,25 | 4,5 | 3 |

***3. Határozzuk meg a függvény deriváltját***

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|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| А | B | C | D | E |
|  |  |  |  |  |

***4. Párosítsuk a függvényeket (1-4) a deriváltjaikkal (А-E). (minden válasz 1 pont)***

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|  |  |  |  |
| --- | --- | --- | --- |
| 1 | y = 3sinx | А | 3cosx |
| 2 | y = xsin3 | B | 3 |
| 3 | y = | C | 3cosx |
| 4 | y = | D | sin3 |
| 5 |  | E | 3 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | А | B | C | D | E |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| 4 |  |  |  |  |  |

***5. (2 pont) Az anyagi pont az törvény szerint mozog (t – idő, másodpercben, S – elmozdulás, méterben). Határozzuk meg a test sebességét a t=2s időpontban.***

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***6. (3 pont) Határozzuk meg a függvények deriváltjának értékét az adott pontokban:***

***а) ha х0 = 3; b) ha х0 =***

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**11. osztály, Jánosi Líceum, Algebra**

**Név\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_\_\_\_\_\_\_osztályos tanuló**

**Ellenőrző dolgozat. Téma : Derivált**

***II. változat***

(1 – 3 feladаt: 1 pont

***1. Határozzuk meg a függvény deriváltját***

……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| А | B | C | D | E |
|  |  |  |  |  |

***2. Határozzuk meg az függvény deriváltjának értékét az х0 = 9***

……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| А | B | C | D | E |
| -5 | 6 |  |  |  |

***3. Határozzuk meg a függvény deriváltját***

……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| А | B | C | D | E |
|  |  |  |  |  |

***4. Párosítsuk a függvényeket (1-4) a deriváltjaikkal (А-E). (minden válasz 1 pont)***

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………….

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|  |  |  |  |
| --- | --- | --- | --- |
| 1 | y = 5cosx | А | -5sinx |
| 2 | y = xcos5 | B | -5 |
| 3 | y = | C | -5sinx |
| 4 | y = | D | cos5 |
| 5 |  | E | cos5 – xsin5 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | А | B | C | D | E |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| 4 |  |  |  |  |  |

***5. (2 pont) Az anyagi pont az (t – idő, másodpercben, S – elmozdulás, méterben). Határozzuk meg a test sebességét a t=3s időpontban.***

…………………………………………………………………………………………………………………………………………………………………………………………………………………………......................................

***6. (3 pont) Határozzuk meg a függvények deriváltjának értékét az adott pontokban:***

***а) ha х0 = 2; b) ha х0=***

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