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**Підсумкова контрольна робота**

**з алгебри**

*учня (учениці) 11 класу*

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 *Варіант 1***

**1**. *(0,5 балів)*Розв’яжіть нерівність .

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| А | Б | В | Г | Д |
| [2;3) |  |  |  |  |

**2.** *(0,5 балів)* Розв’яжіть рівняння

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| А | Б | В | Г | Д |
|  |  |  |  |  |

**3.** *(0,5 балів)* Відомо, що . Порівняйте *m* i *n*.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| А | Б | В | Г | Д |
|  |  |  |  | Порівняти неможливо |

**4.** *(0,5 балів)* Яка ймовірність того, що навмання вибране двоцифрове число кратне числу 15?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| А | Б | В | Г | Д |
|  |  |  |  |  |

**5.** Установіть відповідність між виразами (1 – 4) і відповідними значеннями цих виразів (А – Д). За кожну правильну відповідність 0,5 бала.

|  |  |  |  |
| --- | --- | --- | --- |
| 1 |   | А | 4 |
| 2 | Знайдіть значення похідної функції у точці  | Б | 7 |
| 3 | Обчисліть:  | В | 10 |
| 4 |  | Г | -4 |
|  |  | Д | 49 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | А | Б | В | Г | Д |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| 4 |  |  |  |  |  |

**6.** (1 бал) Запишіть рівняння дотичної до графіка функції у точці з абсцисою .

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**7.** (1 бал) Знайдіть екстремуми функції .

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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**8.** (2 бали) Знайдіть первісну для функції , графік якої проходить через точку M .

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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**9.** (2 бали) Розв’яжіть нерівність

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**10.** (2 бали) Обчисліть площу фігури, обмеженої гіперболою і прямою

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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 *Оцінка* \_\_\_\_

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**Підсумкова контрольна робота**

**з алгебри**

*учня (учениці) 11 класу*

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 *Варіант 2***

**1**. *(0,5 балів)*Розв’яжіть нерівність .

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| А | Б | В | Г | Д |
| (1;+) |  |  |  |  |

**2.** *(0,5 балів)* Розв’яжіть рівняння

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| А | Б | В | Г | Д |
|  |  |  |  |  |

**3.** *(0,5 балів)* Відомо, що. Порівняйте *m* i *n*.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| А | Б | В | Г | Д |
|  |  |  |  | Порівняти неможливо |

**4.** *(0,5 балів)* На 15 картках записано натуральні числа від 1 до 15. Яка ймовірність того, що число, записане на навмання вибраній картці, не ділиться націло ні на 2, ні на 3?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| А | Б | В | Г | Д |
|  |  |  |  |  |

**5.** Установіть відповідність між виразами (1 – 4) і відповідними значеннями цих виразів (А – Д). За кожну правильну відповідність 0,5 бала.

|  |  |  |  |
| --- | --- | --- | --- |
| 1 |   | А | 25 |
| 2 | Знайдіть значення похідної функції у точці  | Б | 3 |
| 3 | Обчисліть:  | В | 11 |
| 4 |  | Г | 2 |
|  |  | Д | 4 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | А | Б | В | Г | Д |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| 4 |  |  |  |  |  |

**6.** (1 бал) Точка рухається за законом (час *t* вимірюється в секундах, переміщення *S* – у метрах). Через який час від початку руху ця точка зупиниться?

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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**7.** (1 бал) Знайдіть екстремуми функції .

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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**8.** (2 бали) Знайдіть первісну для функції , графік якої проходить через початок координат.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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**9.** (2 бали) Розв’яжіть нерівність

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**10.** (2 бали) Обчисліть площу фігури, обмеженої гіперболою і прямими та

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 *Оцінка* \_\_\_\_

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**Підсумкова контрольна робота**

**з алгебри**

*учня (учениці) 11 класу*

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 *Варіант 3***

**1**. *(0,5 балів)*Розв’яжіть нерівність .

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| А | Б | В | Г | Д |
| (-1;0) |  |  |  |  |

**2.** *(0,5 балів)* Розв’яжіть рівняння

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| А | Б | В | Г | Д |
|  |  |  | Рівняння не має коренів |  |

**3.** *(0,5 балів)* Відомо, що . Порівняйте *m* i *n*.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| А | Б | В | Г | Д |
|  |  |  |  | Порівняти неможливо |

**4.** *(0,5 балів)* Яка ймовірність того, що навмання вибране двоцифрове число кратне числу 11?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| А | Б | В | Г | Д |
|  |  |  |  |  |

**5.** Установіть відповідність між виразами (1 – 4) і відповідними значеннями цих виразів (А – Д). За кожну правильну відповідність 0,5 бала.

|  |  |  |  |
| --- | --- | --- | --- |
| 1 |   | А | -1 |
| 2 | Знайдіть значення похідної функції у точці  | Б | 3 |
| 3 | Обчисліть:  | В | 10 |
| 4 |  | Г | 4 |
|  |  | Д | 9 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | А | Б | В | Г | Д |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| 4 |  |  |  |  |  |

**6.** (1 бал) Запишіть рівняння дотичної до графіка функції у точці з абсцисою .

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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**7.** (1 бал) Знайдіть екстремуми функції .

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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**8.** (2 бали) Знайдіть первісну для функції , графік якої проходить через точку M .

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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**9.** (2 бали) Розв’яжіть нерівність

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**10.** (2 бали) Обчисліть площу фігури, обмеженої гіперболою і прямою

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**Підсумкова контрольна робота**

**з алгебри**

*учня (учениці) 11 класу*

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 *Варіант 4***

**1**. *(0,5 балів)*Розв’яжіть нерівність .

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| А | Б | В | Г | Д |
| (-1;1) |  |  |  |  |

**2.** *(0,5 балів)* Розв’яжіть рівняння

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| А | Б | В | Г | Д |
|  |  |  |  | Рівняння коренівне має  |

**3.** *(0,5 балів)* Відомо, що. Порівняйте *m* i *n*.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| А | Б | В | Г | Д |
|  |  |  |  | Порівняти неможливо |

**4.** *(0,5 балів)* П’ять карток занумеровано числами 1, 2, 3, 4, 5. Яка ймовірність того, що сума номерів вибраних навмання двох карток дорівнюватиме 7?

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| А | Б | В | Г | Д |
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**5.** Установіть відповідність між виразами (1 – 4) і відповідними значеннями цих виразів (А – Д). За кожну правильну відповідність 0,5 бала.

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| --- | --- | --- | --- |
| 1 |   | А | 16 |
| 2 | Знайдіть значення похідної функції у точці  | Б | 2 |
| 3 | Обчисліть:  | В | 6 |
| 4 |  | Г | -1 |
|  |  | Д | 10 |

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| --- | --- | --- | --- | --- | --- |
|  | А | Б | В | Г | Д |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| 4 |  |  |  |  |  |

**6.** (1 бал) Точка рухається за законом (час *t* вимірюється в секундах, переміщення *S* – у метрах). Через який час від початку руху ця точка зупиниться?

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**7.** (1 бал) Знайдіть екстремуми функції .

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**8.** (2 бали) Знайдіть первісну для функції , графік якої проходить через початок координат.

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**9.** (2 бали) Розв’яжіть нерівність

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**10.** (2 бали) Обчисліть площу фігури, обмеженої гіперболою і прямими та

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 *Оцінка* \_\_\_\_\_