

# КР «Пределы и производная»

## Вариант 0

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1. <math>\lim_{x \rightarrow 1} \frac{x^3 + 2x^2 + 3x - 6}{2x^2 + 7x - 9}</math></p> <p>2. <math>\lim_{x \rightarrow \infty} \frac{8x^2 + \sqrt{2x^4 + 2x}}{5x - 2x^2}</math></p> <p>3. <math>\lim_{x \rightarrow 3} \frac{\sqrt{x+1} - \sqrt{2x-2}}{x^2 + x - 12}</math></p> <p>4. <math>\lim_{x \rightarrow \pi/2} \frac{6x - 3\pi}{\cos(-3x)}</math></p> <p>5. <math>\lim_{x \rightarrow \infty} \left( \frac{3x}{3x+7} \right)^{8x-5}</math></p> <p>6. <math>\lim_{x \rightarrow 0} \frac{(e^{7x^2} - \cos 3x) \cdot \operatorname{arctg} x}{\operatorname{arctg}(\ln(1 - 5x^2))}</math></p> <p>7. <math>\lim_{x \rightarrow \infty} (4x^2 - 5x)^{\frac{1}{\ln(7x+3)}}</math></p> | <p>8. <math>y = \arccos \frac{\sqrt{3x^2 - 5}}{\log_7(6x - 2x^9)}</math></p> <p>9. <math>y = (6x^2 + 7x)^{\operatorname{arctg}(\pi x)}</math></p> <p>10. <math>yx = \ln(4x^2 + 5y^5) - \sin e</math></p> <p>11. <math>y = 5^{\sin \sqrt{\sin(1/2x^2)}}</math></p> <p>12. <math>\begin{cases} x = t^4 \log_5 3t, \\ y = \frac{1}{\sqrt[5]{6t-2}} \end{cases}</math></p> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|