|  |
| --- |
| 1. Let http://place30.placementtester.com:8080/leicester/tmp/ad/hn/go/jndhhpiipmnokcnoigjhbggdmb.gifhttp://place30.placementtester.com:8080/leicester/tmp/ak/ln/hn/cckdmbibfigajbgmfpapegkmmi.gif .
 |
| **(a)** |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Find all stationary points of the function http://place30.placementtester.com:8080/leicester/tmp/nc/ld/na/mocajgnpejioffnhclgmemhoci.gifamd enter their coordinates separated by ”;”, with at least 3 decimal places. For example, ” http://place30.placementtester.com:8080/leicester/tmp/io/ie/jj/bkfihbaoalijacioajefadbfoe.gif” |  | http://place30.placementtester.com:8080/leicester/modules/skin/images/grading/correct.gif**Correct** |

|  |  |
| --- | --- |
| **Your Answer:** | (0.001,1.001);(0.001,-1.001) |
| **Correct Answer:** | (0 ± 0.001,1 ± 0.001);(0 ± 0.001,-1 ± 0.001) |

 |
| **(b)** |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Let http://place30.placementtester.com:8080/leicester/tmp/ip/fg/bg/iblhohdejdbannfpfhfndgbbcg.gifbe the saddle point of the function http://place30.placementtester.com:8080/leicester/tmp/nc/ld/na/mocajgnpejioffnhclgmemhoci.gif. Calculate the following expression: http://place30.placementtester.com:8080/leicester/tmp/pd/dj/ji/iddijgbiobcbhklakiajccmoik.gif, and enter the value with at least 3 dp. |  | http://place30.placementtester.com:8080/leicester/modules/skin/images/grading/correct.gif**Correct** |

|  |  |
| --- | --- |
| **Your Answer:** | 25.001 |
| **Correct Answer:** | 25± 0.001 |

 |
| **(c)** |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|

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| --- |
| What is(are) type of stationarity the other point(s)? Please select all correct answers |

|  |  |  |  |
| --- | --- | --- | --- |
| **Choice** | **Selected** | **http://place30.placementtester.com:8080/leicester/modules/skin/images/grading/correct_incorrect.gif** | **Points** |
| saddle point | No |   |   |
| minimum | No |   |   |
| there are no others stationary points | No |   |   |
| maximum | Yes | http://place30.placementtester.com:8080/leicester/modules/skin/images/grading/correct_small.gif | +1 |

 | http://place30.placementtester.com:8080/leicester/modules/skin/images/grading/correct.gif**Correct** |
| Number of available correct choices: 1 |  |
| 2**) Let** $f\left(x,y\right)=6e^{x^{2}}-y^{2}+5y+6$a) Stationary pointsb) Let $(x\_{s},y\_{s})$ be the saddle point of the function $f\left(x,y\right),calculate the following expression f\left(x\_{s} y\_{s}\right)-(x\_{s}+y\_{s})$c) What type of stationary points (Stationary, saddle, min, max) |  |

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