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| ***Question I:* [3 Points]**  **A. Describe the domain of and find the value of** |
| **B. Sketch the level curves of for.**    ***Question II:* [7 Marks]**  **A. Find the following limits if they exist**  **(i)**  **(ii)**  **(iii)**  **B. Discuss the continuity of**    **C. Let Use the differential to approximate the change in as changes from to**  ***Question III:* [5 Marks]**  **If**  **A. Show that f is continuous at (0,0)**  **B. Find and**  **C. Is differentiable at ? Justify your answer**  ***Question IV:* [5 Points]**  **A. Find if is determined implicitly by the equation** |
| **B. Let Show that.**  **C. Let where and. Find** |

Good Luck ☺