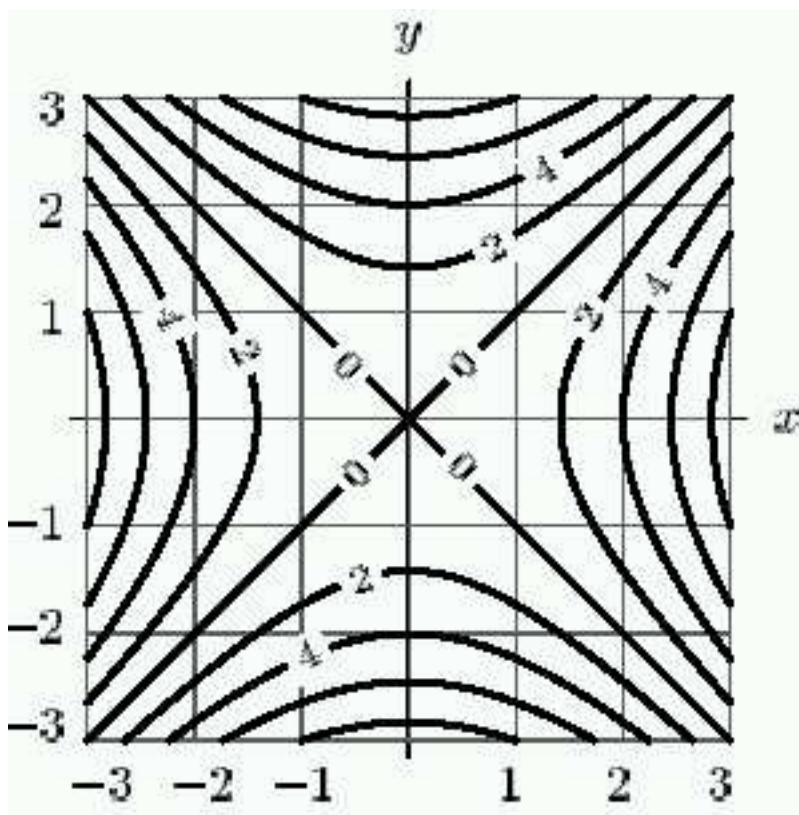


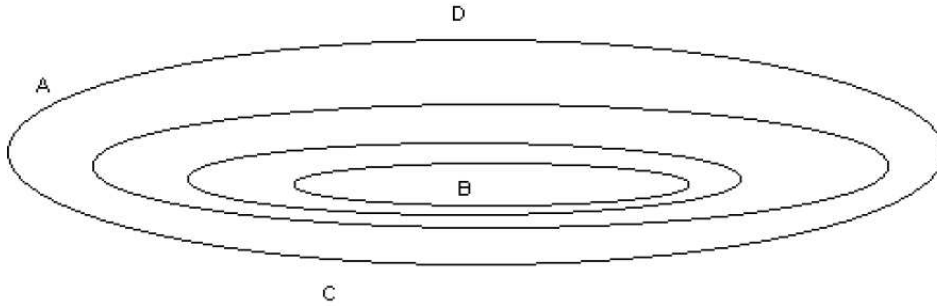
Classroom Voting Questions: Multivariable Calculus

12.3 Contour Diagrams

1. Which of the following terms best describes the origin in the contour diagram in the figure below?

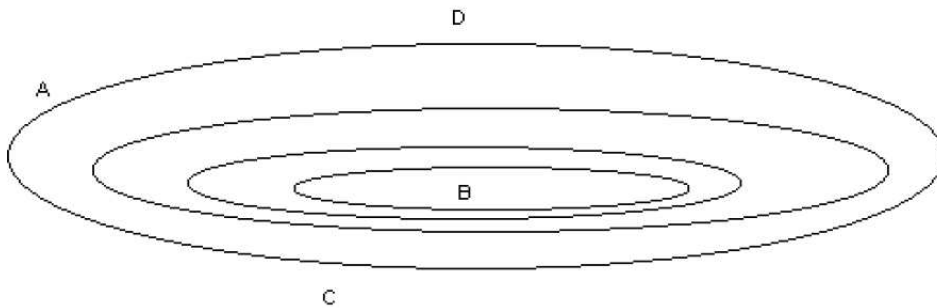


- (a) A mountain pass
 - (b) A dry river bed
 - (c) A mountain top
 - (d) A ridge
2. Using the contour plot pictured, which path will result in the greatest change in altitude?



- (a) From A to B
- (b) From C to B
- (c) From D to B
- (d) All changes in altitude are approximately equal.

3. Using the contour plot pictured, which path is the steepest?



- (a) From A to B
- (b) From C to B
- (c) From D to B
- (d) All changes in altitude are approximately equal.

4. The contour lines of $z = e^{\sin(x^2+y^2)}$ will be

- (a) lines
- (b) circles
- (c) exponential curves
- (d) none of the above

5. The contours of graph of $f(x, y) = y^2 + (x - 2)^2$ are either circles or a single point.

- (a) True, and I am very confident
 - (b) True, but I am not very confident
 - (c) False, but I am not very confident
 - (d) False, and I am very confident
6. If all the contours for $f(x, y)$ are parallel lines, then the graph of f is a plane.
- (a) True, and I am very confident
 - (b) True, but I am not very confident
 - (c) False, but I am not very confident
 - (d) False, and I am very confident
7. On a weather map, there can be two isotherms (contour lines) which represent the same temperature but do not intersect.
- (a) True, and I am very confident
 - (b) True, but I am not very confident
 - (c) False, but I am not very confident
 - (d) False, and I am very confident