



Course > Week 5 > Myster... > Proble...

## Problem (5-6)

🔖 Bookmark this page

### Problem 5

1.0/1.0 point (graded)

The Birch and Swinnerton-Dyer Conjecture implies the rank of an elliptic curve  $E$  is equal to the order of the L-function  $L(E, s)$  at a particular point.

Where is it?

☐  $s = 0$

☐  $Re(s) = \frac{1}{2}$

☒  $s = 1$  ✓

☐  $s = \frac{\pi^2}{6}$

Submit

You have used 1 of 2 attempts

📘 Answers are displayed within the problem

### Problem 6

1.0/1.0 point (graded)

Choose the correct statement.

- ☐ The BSD Conjecture was completely solved some years ago. It was finally proved in 2010.
- ☐ Concerning the BSD Conjecture, the inequality claiming the rank is smaller than the order of the L-function is already known. The opposite inequality is unsolved in general.
- ☒ The BSD Conjecture is known when the order of the L-function is less than or equal to **1** thanks to combining results on the modularity, the Gross-Zagier formula, and Kolyvagin's Euler systems. ✓
- ☐ The BSD Conjecture is known unconditionally when the rank order of the elliptic curve is less than or equal to **1**.

Submit

You have used 1 of 2 attempts

**i** Answers are displayed within the problem

© All Rights Reserved



 English ▼

© 2012–2017 edX Inc. All rights reserved except where noted. EdX, Open edX and the edX and Open edX logos are registered trademarks or trademarks of edX Inc. | 粤ICP备17044299号-2

