

Name (Last, First): \_\_\_\_\_

Student ID: \_\_\_\_\_

Dror Bar-Natan: Classes: 2015-16: MAT 475 Problem Solving Seminar:

<http://drorbn.net/16-475>

**Quiz 5** on February 11, 2016: “Modify the Problem” / “Choose an Effective Notation”. You have 22 minutes to solve the problems below. Please write on both sides of the page. **Good Luck!**

**Problem 1** (Larson’s 1.4.4, modified). Let  $\lambda$  be a positive real number. Compute  $\int_{-\infty}^{\infty} e^{-\lambda x^2/2} dx$ .

**Problem 2** (Larson’s 1.5.8). Let  $P_1, P_2, \dots, P_{12}$  be the vertices of a regular 12-gon. Are the diagonals  $P_1P_9$ ,  $P_2P_{11}$  and  $P_4P_{12}$  concurrent?