Mathematics 226H – Geometry I: Euclidean geometry
Trent University, Fall 2006

Problem Set #9
Due in class on Friday, 24 November, 2006.

1. Exercise 4A.2 *[5]*

2. Exercise 4B.2 *[5]*

Math Christmas Carols?

First, to the tune of *Santa Claus Is Coming To Town*:

Oh, better take care completing the square;
You'd better not try dividing by y;
January exams are coming to town.
We're making a list, don't shake in your boots;
Just watch out for extraneous roots.
January exams are coming to town.
You know you'll have quadratics
And exponentials too,
You rationalize denomi-
Nators like root two.
So, you'd better be bright and calculate right,
You'd better check roots for one that suits;
January exams are coming to town.

Second, to the tune of *Rudolph The Red-Nosed Reindeer*:

Zero, that funny cipher, has a shape that looks like "O,"
And if you want to use it, there are things you need to know.
Never divide by zero; if you do, you will be sad,
Getting a crazy answer, making your report look bad.
But treat zero as your friend – use him carefully –
"Safe to multiply and add" – That's the rule for zero, lad!
Zero, that screwball number wants to be a comrade true,
But never divide by zero, or **you'll be getting zero, too!**

I don't know who wrote these lyrics; Melanie Goncalves let me have a copy of these and several other math take-offs on popular Christmas songs.