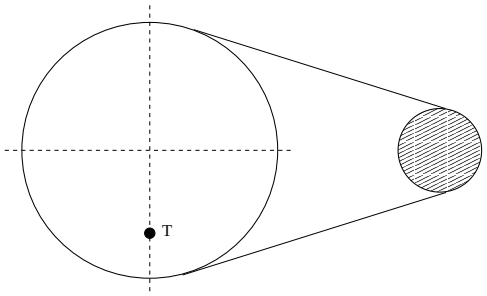
Math 120E Autumn 2002 **Name:** _____

Quiz #6

Quiz Section: _____

SHOW YOUR WORK

A merry-go-round consists of a big wheel connected by a belt to a small drive wheel. The drive wheel has a 3 foot radius and is spinning counterclockwise at 180 RPM. The big wheel has a 16 foot radius. Impose a coordinate system with origin at the center of the big wheel.



1. (3 points) What is the angular speed of the big wheel?

2. (7 points) At $t = 0$ seconds Tafu is sitting on the merry-go-round at a point 13 feet South of the center of the big wheel (see the picture). What are Tafu's x and y coordinates at $t = 6$ seconds?