## Quiz $1 \quad$ Calculus $3 \quad 10 / 30 / 19$

Each problem is worth 5 points. Clear and complete justification is required for full credit.

1. A really scary ghost flies along a line segment from $(3,-4,6)$ to $(1,-3,8)$. Give equations $x(t), y(t), z(t)$, and bounds for $t$ to parametrize this path.
2. A wicked little goblin is running in circles around you gibbering curses. You're at the origin and the goblin's path is a circle with radius 4 feet, which is really frustrating because it puts him just out of reach. Also, you're having a nightmare. Give parametric equations $x(t), y(t)$, and bounds for $t$ that produce 13 times around the goblin's path..
