Name: Quiz 6 NYUID: Section:

1. Proponents of a new ballot measure claim to have the support of 80% of voters. Opposition conducts a survey of 26 people and finds that 11 voters are **against** the measure. Determine ($\alpha = 0.01$) if the true proportion of voters that supports the ballot measure is $p = 0.8$. Report a p-value in your answer.

2. For theoretical reasons, a researcher expects that the time until failure of a certain device will follow a distribution whose **cumulative** distribution function is $1 - e^{-t^2}$ where $t \geq 0$. To test this, data is collected on 100 devices and recorded as follows.

Time interval:	$0 \leq t < 0.2$	$0.2 \leq t < 0.3$	$0.3 \leq t < 0.5$	$0.5 \leq t < 1$	$1 \leq t < 2$	$2 \leq t$
Observations:	2	3	14	34	42	5

Determine if the researcher's choice of distribution is reasonable ($\alpha = 0.10$).