Physics 200 Test – Newton's Laws in 2-D Name: _____

For each problem, enter the missing information into the table.

1. Two segments of rope are supporting an object. Segments are angled at the same angle, relative to horizontal.

Description	Magnitude	Units	Direction
Angle	55	degrees	below horizontal
Mass of object	20	kg	NA
Weight of hanging object			
Vertical component of tension in the left string			
Tension of left string			



2. A sliding mass on an incline is connected via a string and pulley to a hanging mass. μ_k is given.



Description	Magnitude	Units	Direction
Angle of incline to horizontal	20	degrees	Above leftward
Sliding mass	20	kg	NA
Hanging mass	15	kg	NA
Coefficient of friction	0.3	NA	NA
Weight of sliding mass			
Perpendicular Component of sliding object weight			
Parallel Component of sliding object weight			
Weight of hanging object			
Normal Force acting on sliding object			
Friction			
Net Force			
Acceleration			
String Tension			