|  |  |
| --- | --- |
| PH 201-8  Quiz 2  Force Vectors | Name: \_\_\_\_key\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  (please print and also put your name on the back) |

Two masses are hung on a force table to the following specifications. 300g are hung at 45° and 250g are hung at 90°. Calculate the magnitude of the force that each mass exerts on the central ring. Circle/box your final answer.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_×\_\_\_\_\_\_\_\_\_\_\_\_\_\_= \_\_\_\_\_\_\_\_\_ (4pts)

(7pts)

Fill in the following table using the values you calculated above along with the cosine and sine functions (18 pts):

|  |  |  |
| --- | --- | --- |
|  | x-component (\_N\_) | y-component (\_N\_) |
|  |  |  |
|  | 0 |  |
|  | 2.08 | 4.53 |

Use the Pythagorean theorem to find the magnitude of with units (5 pts):

Use (AKA arctangent)to find the angle of with units(4 pts):