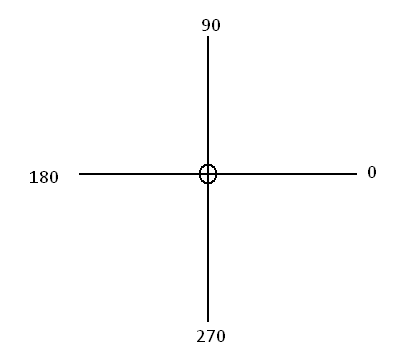
**VECTORS** Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Partners:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   Course:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |
| --- | --- | --- | --- |
| Addition | Resultant Vector | | Force Table Check |
|  | From website: <http://www.1728.org/vectors.htm> | Analytical method |  |
| 50 g @ 200  150 g @ 1500  200 g @ 2500 | *FR=*  *θR=* | *FR=*  *θR=*  *θE=* | \_\_\_\_\_\_\_\_ |



|  |  |  |  |
| --- | --- | --- | --- |
| Addition | Resultant Vector | | Force Table Check |
|  | From website | Analytical method |  |
| 50 g @ 00  and  100 g @ 900 | *FR=*  *θR=* | *FR=*  *θR=*  *θE=* | \_\_\_\_\_\_\_\_ |
| 50 g @ 200  and  250 g @ 1200 | *FR=*  *θR=* | *FR=*  *θR=*  *θE=* | \_\_\_\_\_\_\_\_ |
| 50 g @ 200  250 g @ 1200  300 g @ 3000 | *FR=*  *θR=* | *FR=*  *θR=*  *θE=* | \_\_\_\_\_\_\_\_ |
| 100 g @ 300  150 g @ 1400  125 g @ 2000  200 g @ 3000 | *FR=*  *θR=* | *FR=*  *θR=*  *θE=* | \_\_\_\_\_\_\_\_\_ |
| Resolution | *XXXXXXXXXXXX* | *XXXXXXXXXXX* | XXXXXXXXXXXX |
| 300 g @ 300 | *XXXXXXXXXXXX* | *Fx=*  *Fy=* | \_\_\_\_\_\_\_\_\_ |

Exercise

1. Use the definition of scalar product, http://edugen.wiley.com/edugen/courses/crs4957/halliday9118/halliday9118c03/math/math097.gif, and the fact that http://edugen.wiley.com/edugen/courses/crs4957/halliday9118/halliday9118c03/math/math098.gif to calculate the angle between the two vectors given by:  
 **A** = 2 i - 5 j + 5 k and **B** = 5 i + 2 j - 4 k.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | |  | | --- | |  |   2. Here are three vectors in meters: (P63-HRW9)   |  |  | | --- | --- | | http://edugen.wiley.com/edugen/courses/crs4957/common/art/pixel.gif | | | http://edugen.wiley.com/edugen/courses/crs4957/halliday9118/halliday9118c03/math/math145.gif |  | | http://edugen.wiley.com/edugen/courses/crs4957/common/art/pixel.gif | |   What results from (a) http://edugen.wiley.com/edugen/courses/crs4957/halliday9118/halliday9118c03/math/math146.gif, (b) http://edugen.wiley.com/edugen/courses/crs4957/halliday9118/halliday9118c03/math/math147.gif, and (c) http://edugen.wiley.com/edugen/courses/crs4957/halliday9118/halliday9118c03/math/math148.gif including unit? |