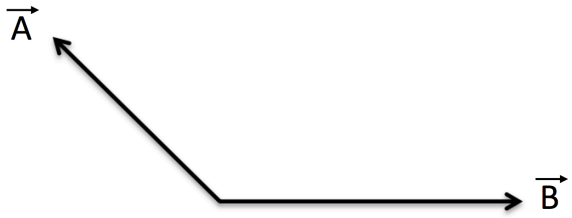
Engineering Physics I – Fall 2015
Quiz 1 **SOLUTIONS**
Name:

1. A table has an area of 3 m^2. What is its area in CGS units?
a) $3x10^2$ cm^2 b) $3x10^6$ mm^2
c) $3x10^{-3}$ km^2 d) $3x10^4$ cm^2

2. Is the dot product of **A** and **B**:
a) < 0
b) = 0
c) > 0



Question 1:
CGS units expresses length in centimeters, otherwise b is a correct answer
$3\ m^2 \times \left(\frac{100\ cm}{1\ m}\right)^2 = 3 \times 100 \times 100\ cm = 3 \times 10^4 \text{cm}$
so the correct answer is d

Question 2:
Recall **A•B = |A||B|**cos θ
The dot product of the two vectors is a, less than zero, because the angle θ between the vectors is between 90 and 180 degrees, so cos θ is negative.