Phabulous Physics

Name _____

Quiz #1

1. An acre is equal to 160 square rods, where 1 rod = 5.5 yards and 1 yard = 0.914 meters. How many square meters are there in an acre?

2. A particle undergoes four successive displacements, **A, B, C,** and **D.** Determine the resultant displacement, using both graphical and rectangular component methods.
A = 80 m along the positive x axis
B = 60 m at 30° above the positive x axis
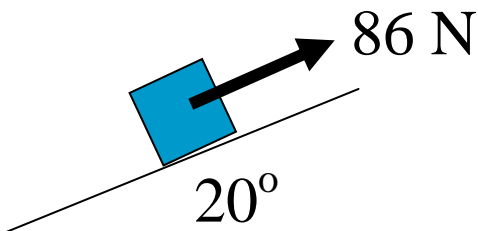**C** = 40 m at 45° above the negative x axis
D = 100 m at 60° below the negative x axis

a. Graphical solution

b. Rectangular component solution

3. If a force of 86 N parallel to the surface of a 20° inclined plane will push a 120 N block up the plane at constant speed, what force parallel to the plane will push it down at constant speed?

86 N

20°

What is the coefficient of kinetic friction between the block and the plane?