AP Physics Review 2008
VECTORS:

Book Chapter(s): 3
Book Pages: 57-64
Practice Problems: pp74-79; 6, 14, 44, 48

Terms/ Ideas:

Vector
Scalar
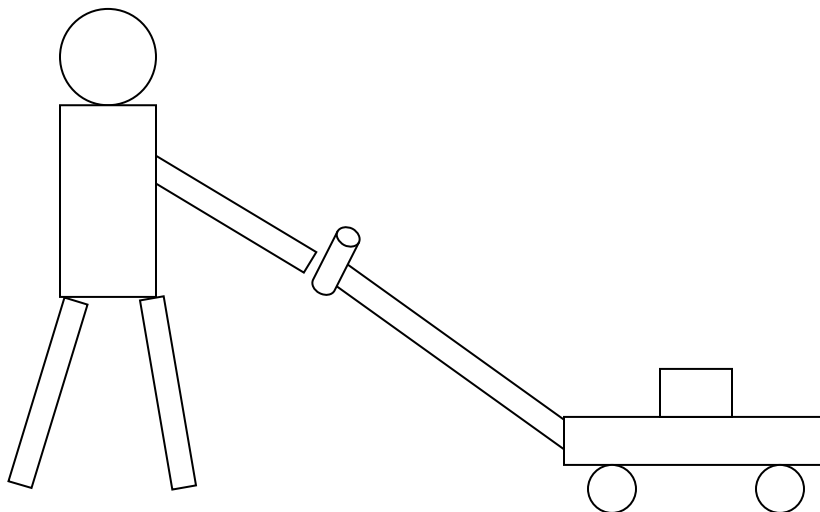Resultant
Displacement
Equilibrant
Vector Component Method

Equations:
$c^2 = a^2 + b^2 - 2ab \cos C$

$$\frac{a}{SinA} = \frac{b}{SinB} = \frac{c}{SinC}$$

$c^2 = a^2 + b^2$

Free Response Question:

1) A man is pushing a 125.0 kg lawn mower as shown. The handle of the mower is at an angle of 37° with the horizontal. How much force must the man apply to the handle to get the mower moving 5.0 m/s in 5 seconds? (No frictional force.)

2) What would the vertical and horizontal components of the force applied be in the above example?

3) How much force would the man apply, along the handle, if the coefficient of friction were .128?

4) How much force would the man have to apply to the handle of the mower if he was pulling instead of pushing?

5) Draw a free body diagram for the above problem.