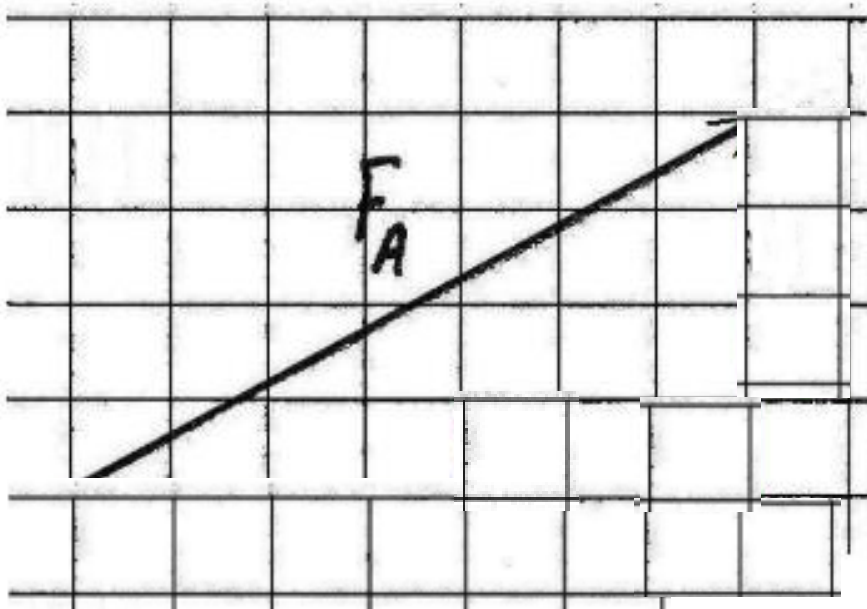


PQ1 Vectors

q

Q1

1.) Graphically break down the following force into its components.



Q2

Given that $F_A = 26.7 \text{ N}$ in the direction: E 18.7° N, find F_{Ax} and F_{Ay} .

Q3

Graphically add the following vectors.

a) A person walks at 2.0 m/s , east relative to a moving sidewalk that is going 3.0 m/s , east.

Graphically add the following vectors.

b) A person swims upstream at 1.0 m/s , south relative to a river going 3.0 m/s , north.

Q4

A 70 N, north force and a 40 N, east force both act on an object.

What is the magnitude and direction of the resultant force?

Q5

A canoe goes directly across a river at 3.5 m/s.
The water flows at 2.0 m/s and is 698 m across.
a) What is the resultant velocity of the boat?

Q6

A 75 km/h wind blows toward 137° , while a plane flies toward 216° at 235 km/h. What is the resultant velocity of the plane?

Q7

A stone is catapulted with a velocity of 25 m s^{-1} at an angle of 40° to the horizontal. What is its velocity after 2 s?