Physics 231 - 17-Sep-99

- Force and motion - Dynamics
  - Newton's 3 Laws
  - Newton's 1st Law
  - Forces
    - Balanced and Unbalanced
    - Net Force
    - Components of Force
- Newton's 2nd Law
- quiz

Newton's 3 Laws

- First Law - Inertia
- 2nd Law - Cause and Effect
- 3rd Law - Action and Reaction

Newton's 1st Law

Forces

Free Body Diagrams

Forces

- Balanced and Unbalanced

- Net Force

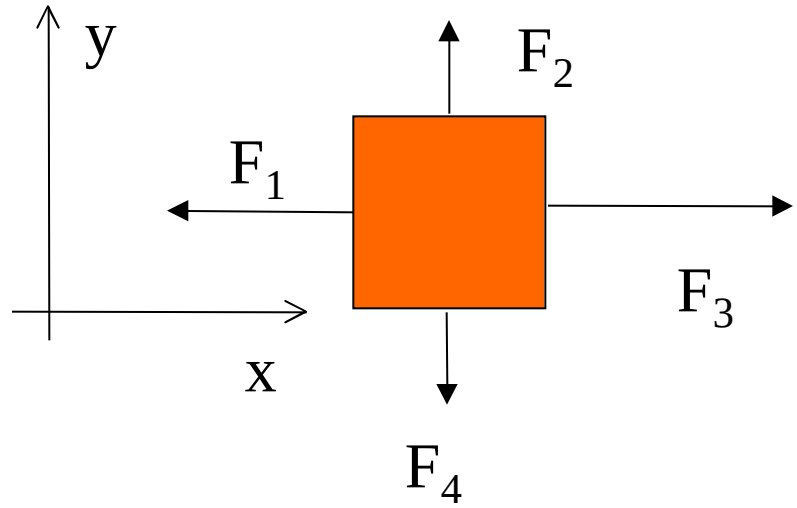
Forces

- Components of Forces

Newton's 2nd Law

Q1 - Answer = c
Q2 - Problem A - Last name A-K

The rectangular object on the right has four forces with magnitudes F_1 = 5 N, F_2 = 6 N, F_3 = 8 N and F_4 = 6 N acting on it. What is the magnitude and direction of the net force acting on the object?



a. 13 N in + x direction

b. 12 N in -y direction

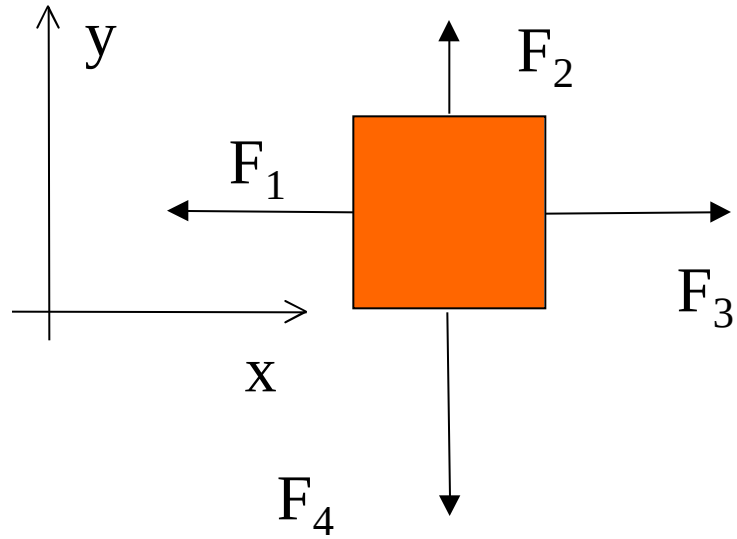
c. 3 N in - x direction

d. 3 N in + x direction

e. 3.75 N at 30° relative to + x and 60° relative to + y

Q1 - Answer = c
Q2 - Problem B - Last Name L-Z

The rectangular object on the right has four forces with magnitudes F_1 = 5 N, F_2 =4 N, F_3 = 5 N and F_4 = 8 N acting on it. What is the magnitude and direction of the net force acting on the object?



a. 9 N in + x direction

b. 12 N in -y direction

c. 4 N in + y direction

d. 4 N in -y direction

e. 6.67 N at an angle of 45° to +y direction and - x