

## Balanced and Unbalanced Forces – Pulley Island Quiz

Scenario 1. Imagine two islanders are pulling down on different sides of a rope which is hanging over either side of a fixed pulley. Islander A is pulling harder than Islander B.

1. What will happen?
  - a) The fixed pulley wheel will rotate toward Islander A
  - b) The fixed pulley wheel will rotate away from Islander A
  - c) The fixed pulley wheel will not move
2. This scenario is an example of:
  - a) forces with equal strengths and opposite direction
  - b) balanced forces
  - c) unbalanced forces
  - d) both a and b
  - e) both a and c

Scenario 2. Imagine two teams of islanders are playing tug of war. They are both pulling on a rope with a flag tied in the middle. One team is pulling toward the ocean and toward the center of the island. Each team is pulling with equally hard, but in opposite directions.

3. What will happen?
  - a) The flag will move toward the ocean
  - b) The flag will move to toward the center of the island
  - c) The flag will not move
4. This scenario is an example of:
  - a) forces with equal strengths and opposite direction
  - b) balanced forces
  - c) unbalanced forces
  - d) both a and b
  - e) both a and c
5. True or False. Unbalanced forces are necessary to cause a nonmoving object to start moving.