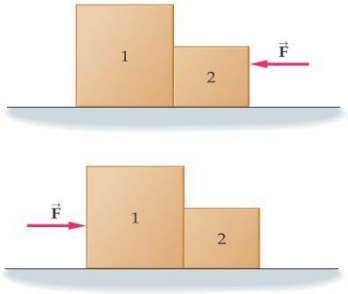
Name:_____ Date:_____

Mr. Croom's Physics Chapter 4: Force and the Law of Motion

Newton's Third Law 2

1. Block 1 has a mass of 10kg and block 2 has a mass of 5kg. If the force that pushes the blocks below is 45N what is the force between block 1 and 2 in each case?

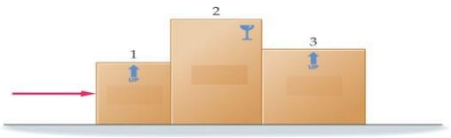


a) 30N
b) 15N

2. The three boxes below are from bottom to top, 20kg, 15kg, 12kg. If they are sitting on the floor, how much force does the floor have to push up with? What is the force that each of the other boxes must support?

Floor=460.6N
Box 1 on Box 2= 264.6N
Box 2 on Box 3= 117.6N

3. Three boxes sit on the floor. Box 1 is 75N, box 2 is 18kg, box 3 is 90N. If a force of 70N is applied to these boxes as show by the arrow. What is the acceleration of the 3 boxes? What is the force between each of the boxes?



a) a= 2.01m/s^2
b) box 1 on 2 = 54.64N
c) box 2 on 3 = 18.46N

4. In a wedding cake, the layers are 30N, 15N, and 5N. How much force must the table support? How much weight (force) must each of the layers support?

Table= 50N
Tier 1= 20 N
Tier 2= 5N