**Forces and Motion**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Instruction: In application to the simulation shown, answer the following questions below.

1. There are 10 players playing tug of war that can exert 1000 N force. The first two largest players can both exert 400 N force and the last two smallest players can give the total of 30 N force. Find the:
2. The total force of the other 6 players can exert
3. If we pull out the middle player of the Team A and the fourth player of the Team B? What will be the force of Team A and Team B? What is their sum of forces?
4. In a certain supermarket, a man is pushing a cart with the mass of 70 kg, if the man is 30 N, what will be the speed of the cart travelling east?
5. Compare the applied force and speed of a man pushing a box with a 50 N :
6. With friction
7. Without Friction
8. Assume that in an unpolished floor, a lady us pushing a 40 kg box to the left with an applied force of 192 N. Find the :
9. Sum of forces
10. Friction of force
11. Acceleration
12. What will happen to the lady if the box will reach beyond the maximum speed?