

Problem Set Net Force

Name: _____
Date: _____

The net force is the vector sum of all the forces that act upon an object. That is to say, the net force is the sum of all the forces acting on the object simultaneously, taking into account the fact that a force is a vector and two forces of equal magnitude and opposite direction will cancel each other out. Calculate the net force acting on the boxes below.

Give the direction of the movement of each box. If it moves to the right use (R), if it moves to the left (L), if it moves up (U), if it moves down (D), and if there is no movement use (NM).

1.



Net Force: _____

2.



Net Force: _____

3.



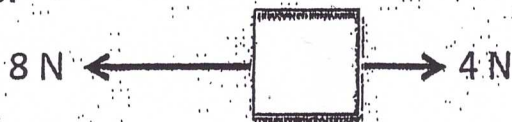
Net Force: _____

4.



Net Force: _____

5.



Net Force: _____

6.



Net Force: _____

7.



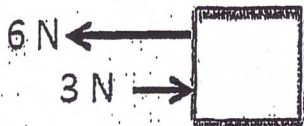
Net Force: _____

8.



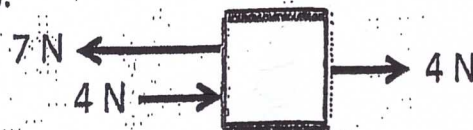
Net Force: _____

9.



Net Force: _____

10.



Net Force: _____

11. What is net force? _____

12. A person pulls a wagon on a farm filled with pineapples with a force of 10 N east as his friend pushes it with 9 N east. What is the net Force?

13. Charlotte and her brother were helping their aunt move a piece of furniture across the carpeted floor. Charlotte pulls with a force of 25 N while her brother pushes with a force of 75 N in the same direction. What is the net force?

14. At the end of the year, 8C was in competition against 8D for the Team Athletic trophy in a game of tug-of-war in 1998. Team 8C pulls with a force of 85 N east as Team 8D pulls with a force of 78 N in the opposite direction. What is the net force generated? Which team won the trophy? Draw a picture to support your answer.

15. What is a balanced force? _____

16. What is an unbalanced force? _____

17. a. Draw and show a picture of an object displaying a balanced force acting on it.

b. Draw another picture showing an unbalanced force.

18. In the figure to the left in which direction is the box moving?

