

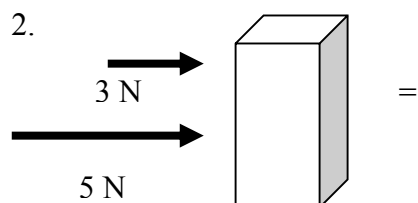
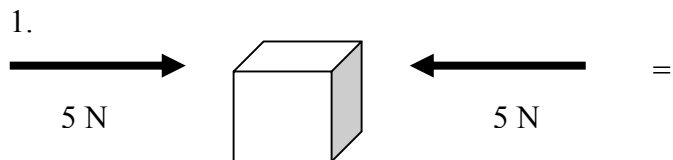
Name: _____ Date: _____

Calculating Net Force - p. 19

Net Force =

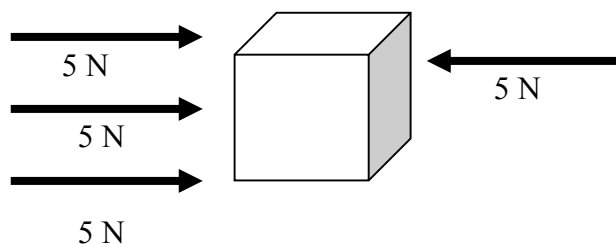
Forces	Going in the SAME direction	Going in OPPOSITE directions	EQUAL and OPPOSITE
Calculation			

Directions: Calculate the net forces acting on the objects described below. **Circle the number of any problem that results in NO MOTION.**

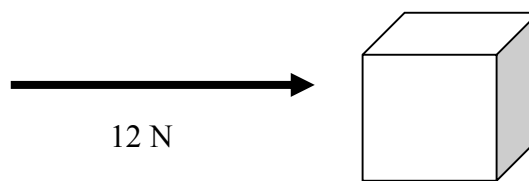


3. Which team will push the box farther?

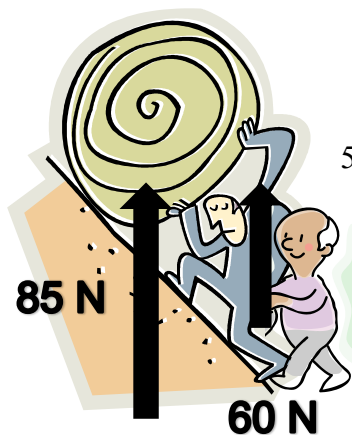
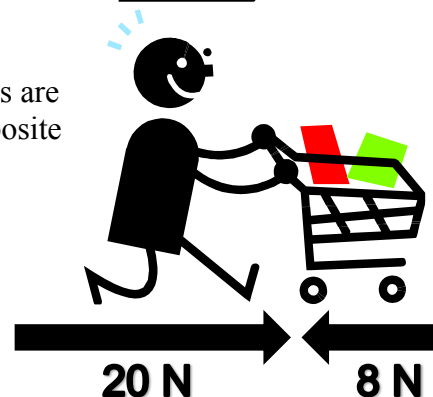
Team 1



Team 2

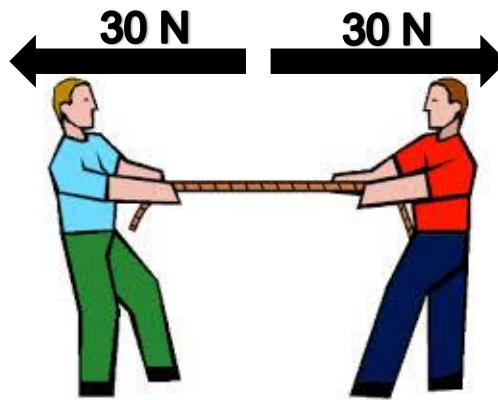


4. Sally is pushing a shopping cart with a force of 20 N. Because the wheels are stuck, the friction caused by the ground is exerting a force of 8 N in the opposite direction. Calculate the net force on the shopping cart, including an arrow indicating what direction the shopping cart is going.

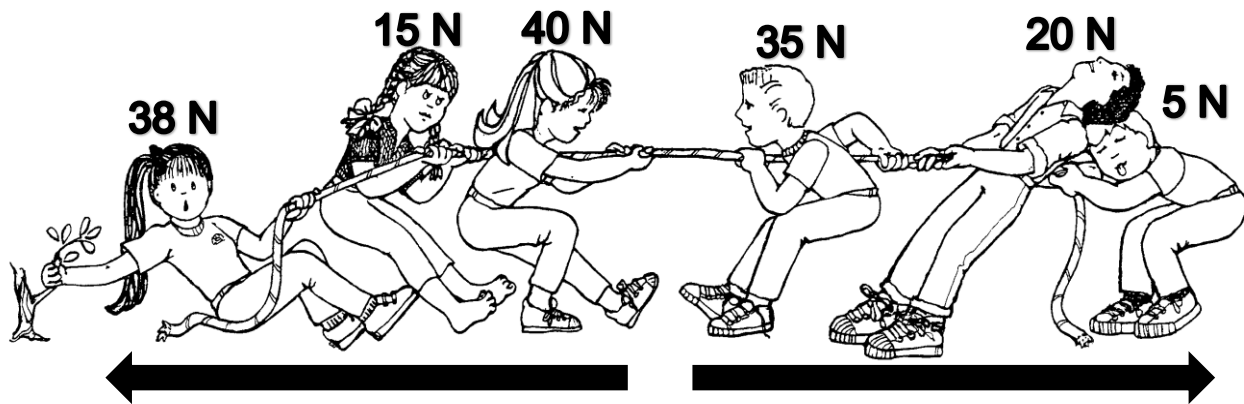


5. Jeff is pushing a rock up a hill with a force of 85 N. If Chris comes to help and Chris can push with a force of 60 N, what is the net force on the rock?

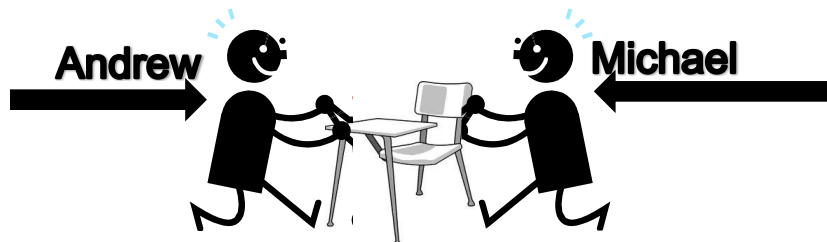
6. Calculate the net force on the rope.



7. Calculate the net force to determine which team will win the tug of war.



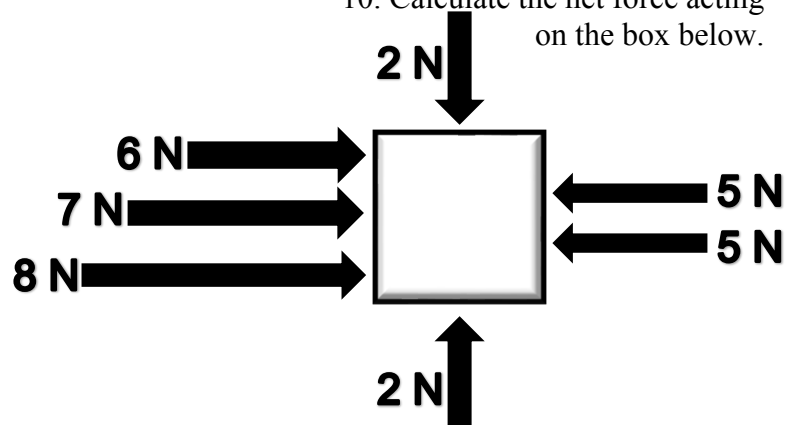
8. Michael and Andrew are pushing a desk across the room. To be funny, Michael decides to push against Andrew instead of with him. Michael can push with a force of 30 N. Andrew can only push with a force of 28 N. In which direction will the desk move?



9. Greg, Matt, and Stephen work together to hold the door shut to keep out the zombies. Greg pushes with a force of 15 N, Matt with 12 N, and Stephen with 22 N. What is their net force on the door?

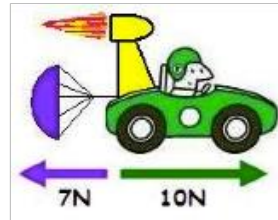


10. Calculate the net force acting on the box below.



Opposite Directions

11. What is the net force on the car?



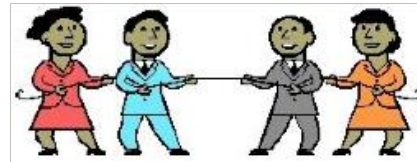
- a. Net force =
- b. Is this force balanced or unbalanced?

12. A boy takes his dog for a walk. The dog is pulling with a force of 30N to the right and the boy is pulling backwards with a force of 18N. What is the net force on them?

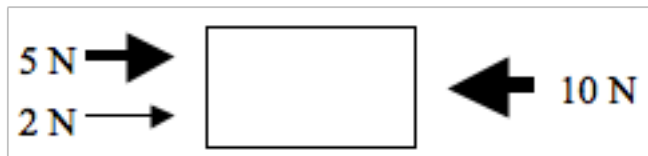
- a. Net force =
- b. Is this force balanced or unbalanced?

13. **Both** of the people on the left are pulling with a force of 55N to the left. On the right side of the rope, one person is pulling with 35N to the right, and the other person is pulling 20N to the right. What is the net force on the rope?

- a. Net force=
- b. Is this balanced or unbalanced?



14. What is the net force of the figure below?



- a. Net force =
- b. Is this balanced or unbalanced?

Same Direction

15. Look at the picture to the right. Both men are pushing on the refrigerator with a force of 100N. What is the net force of the refrigerator?

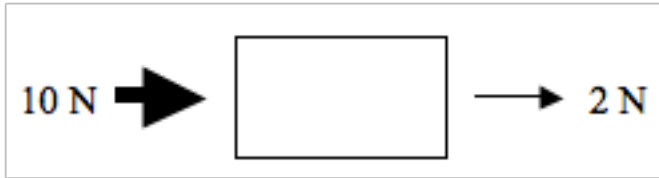


- a. Net force=
- b. Is this force balanced or unbalanced?

16. Frankie and Caitlin are trying to move on a small four-wheeler out of their garage. Frankie pushes with a force of 40N. Caitlin pushes with a force of 20N. What is the net force on the four-wheeler?

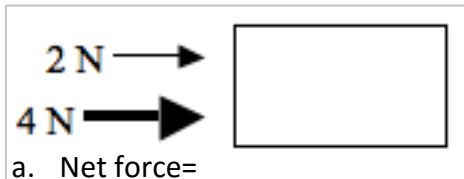
- a. Net force=
- b. Is this balanced or unbalanced?

17. What is the net force of the figure below?



- a. Net force=
- b. Is this balanced or unbalanced?

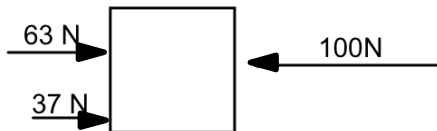
18. What is the net force of the figure below?



- a. Net force=
- b. Is this balanced or unbalanced?

Balanced Forces

19. What is the net force of the figure below?



- a. Net force =
- b. Is this balanced or unbalanced?

20. Look at the picture below. The arrows show the direction and force of the two big horn rams. What is the net force of the rams?



- a. Net force=
- b. Is this balanced or unbalanced?

