25 points Circle the correct answer for each question.

- 1. What must we know when we want to find a resultant force?
 - a. A magnitude of force
 - b. A direction of force
 - c. A shape of an object
 - d. Both a. and b.
- 2. Which tool is used to measure the magnitude of force?
 - a. A spring scale
 - b. A measuring cylinder
 - c. A measuring tape
 - d. A tapeline
- 3. Which is the unit of force?
 - a. Gram
- b. Newton
- c. Kilogram
- d. Kilometer
- 4. If the resultant force is zero, what will happen to the object?
 - a. The object will move forward.
 - b. The object will move fast.
 - c. The object will move slowly.
 - d. The object will not move.
- 5. If we use two cows to pull a cart, how many resultant force will there be?
 - a. 1 force
- b. 2 forces
- c. 3 forces
- d. 4 forces

6. In which diagram will the object not move?

3 N → a. 4 N -

b. 2 N → <--3 N 1 N +

3 N → - 6 N C.

3 N → d.

- 7. From Question 6, in which will the object move to the right?
 - a. a. and b.
- b. b. and c.
- c. c. and d.
- d. a. and d.
- 8. A tow truck exerted 1,000 N to drag a car. A force of 100 N was also exerted to push the car before it started moving.

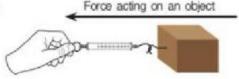
If the extra force was not exerted, how much force would the tow truck need to move the car?

- a. 100 N
- b. 900 N
- c. 1.000 N
- d. 1,100 N
- 9. Team A played tug of war with Team B. Each team had 3 players. Each player of Team A exerted 500 N. How much force should each player of Team B exert so that they can win?
 - a. 300 N
- b. 400 N
- c. 500 N
- d. 600 N

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- 10. From Question 9, what is the resultant force of Team B?
 - a. 900 N
 - b. 1,200 N
 - c. 1,500 N
 - d. 1,800 N
- 11. Which of the following is correct?
 - An object that is not moving has the highest resultant force.
 - A resultant force makes an object to change its shape.
 - A resultant force is the sum of all forces that act on an object.
 - d. A and B push a cupboard in the same direction. The resultant force is zero.
- 12. Which does not use resultant force?
 - a. A swing
 - b. Rowing a boat
 - c. A syringe
 - d. A suspension bridge
- 13. When will there be a friction force?
 - When an object is not moving on water.
 - b. When an object is moving.
 - c. When an object is hanging on a tree.
 - d. When an object is floating in the air.

14.



From the picture, what is the direction of the friction force?

- a. To the front
- b. To the left
- c. To the back
- d. To the right
- 15. Which does not link to friction force?
 - a. The type of surface
 - b. The weight of an object
 - c. The size of an object
 - d. The color of an object
- 16. Why should we use tiles with rough surface on bathroom floor?
 - a. They are beautiful.
 - b. They are easy to clean.
 - c. They are not slippery when wet.
 - d. They lower friction force.
- 17. Which of these activities need the highest friction force?
 - a. Mountain climbing
 - b. Swimming
 - c. Playing football
 - d. Cycling

- 18. Which of these has an increase of friction force?
 - The grooves on the sole of a sports shoe.
 - b. A round cycling helmet
 - c. A trolley for moving things
 - d. A lubricant on a door hinge
- 19. Which surface give the highest friction force when we drag a bag over it?
 - a. Plywood
 - b. Sand
 - c. Glass
 - d. Tile
- 20. Which can move the furthest when we put equal forces in the same direction?
 - An object with smooth surface moving on a smooth floor
 - An object with smooth surface moving on a rough floor
 - c. An object with rough surface moving on a smooth floor
 - d. An object with rough surface moving on a rough floor
- 21. Why are there many accidents on the road when it rains?
 - a. The rain makes the tires to widen.
 - b. The rain makes the roads sticky.
 - c. The rain shuts off the engines.
 - d. The rain makes the roads slippery.

Read and answer questions 22-24.

The table shows the distances that a box moved on different types of floors when a force was exerted on it.

Types of floor	How far the box moves
Α	2 m
В	3 m
С	2.5 m
D	4 m

- 22. Which Floor gives the lowest friction force?
 - a. Floor A
- b. Floor B
- c. Floor C
- d. Floor D
- 23. What should Floor D be?
 - a. Sand
- b. Glass
- c. Grass field
- d. Dirt road
- Arrange the floors from the highest to the lowest friction forces.
 - a. A>B>C>D
 - b. D>C>B>A
 - c. A>C>B>D
 - d. D>B>C>A
- 25. Which of these is the use of lubricants?
 - a. Lower an energy
 - b. Increase an energy
 - c. Lower the friction force
 - d. Increase the friction force

