


Thursday, February 5/15
Science 122

<http://mvhs-sherrard.weebly.com/>



-
1. Questions? -> Complex Circuits
 2. Quiz - Circuits -> Friday, Feb. 6/15
 3. Magnetism
 4. Electric Charge vs. Magnetic Poles
 5. Magnetic Domains
 6. Magnetic Field Lines - Notes and Activity - TBC
-
7. Magnetic Fields

Thursday, February 5/15
Physics 122/121

 <http://mvhs-sherrard.weebly.com/>

-
1. Return - FA - Find \vec{R} Using Perpendicular Components
 2. Force Problems Involving Components: Type I (Push/Pull)
 3. Text: C5 - Page 174, PP #17
Page 208, PP #24 and 25
Page 209, PP #36 } Hw

-
4. Static Equilibrium
 5. Type II - Suspended Objects

Physics 122/121

MHR - Chapter 5 - Page 174

17. A student pushes a 25 kg lawn mower with a force of 150 N. The handle makes an angle of 35° to the horizontal.
- (a) Find the vertical and horizontal components of the applied force.
 - (b) Calculate the normal force supporting the lawn mower while it is being pushed.
 - (c) Calculate the net force propelling the mower if a frictional force of 85 N exists.
 - (d) Calculate the horizontal acceleration of the lawn mower. (Remember: Only part of the F_{applied} is parallel to the direction of horizontal acceleration.)

- a) 86 N, down
1.2 x 10^2 N, right
- b) 3.3 x 10^2 N, up
- c) 38 N, right
- d) 1.5 m/s², right

MHR - Chapter 5 - Page 208

24. A toboggan with a mass of 15 kg is being pulled with an applied force of 45 N at an angle of 40° to the horizontal. What is the acceleration if the force of friction opposing the motion is 28 N?
25. A grocery cart is being pushed with a force of 450 N at an angle of 30.0° to the horizontal. If the mass of the cart and the groceries is 42 kg,
- (a) Calculate the force of friction if the coefficient of friction is 0.60.
 - (b) Determine the acceleration of the cart.

0.43 m/s², right

- a) 3.8 x 10^2 N, left
- b) 0.23 m/s², right

MHR - Chapter 5 - Page 209

36. A 45.0 kg box is pulled with a force of 205 N by a rope held at an angle of 46.5° to the horizontal. The velocity of the box increases from 1.00 m/s to 1.50 m/s in 2.50 s. Calculate
- (a) the net force acting horizontally on the box.
 - (b) the frictional force acting on the box.
 - (c) the horizontal component of the applied force.
 - (d) the coefficient of kinetic friction between the box and the floor.

- a) 9.0 N, right
- b) 132 N, left
- c) 141 N, right
- d) 0.451

Thursday, February 5/15
Science 10

1. Weekly Check
 2. Article Review - Indicators - 1 Day Late Today
 3. Assignment - Indicator Species - Due: Friday, Feb. 6/15
 4. Ecological Levels
 5. Classifying Organisms
 6. Food Chains
 7. Energy Movement in Ecosystems
 8. Photosynthesis
 9. Trophic Levels - To Be Continued
-
10. Food Web
 11. Textbook: Read Page 10-13
Page 13 - Understanding Concepts #1, 2, 4 a-b
 12. Textbook: Page 23 – Understanding Concepts, #1, 2, 3, 4, 5