

Date: _____

Name: _____

Class: _____

1 In the movie, Tim gives both a general and specific definition for the term "hydraulics." Which of these examples falls under Tim's specific definition?

- A Water clock
- B Canal
- C Water well
- D Forklift

2 What can you infer about why hydraulic fluid is usually made of oil instead of water?

- A Oil is cheaper than water
- B Oil can be reused as fuel after the hydraulic machinery wears out
- C Water evaporates too easily under high pressure and temperature
- D Water reduces the temperature inside cylinders too much

3 Which of the following best describes the role played by hydraulic fluid in a hydraulic machine?

- A A source of fuel
- B A medium for the transfer of force
- C A coolant
- D A cleaning agent





4 What is the greatest benefit of the use of hydraulics in machinery?

- A The multiplication of speed
- B The multiplication of operating time
- C The multiplication of fuel efficiency
- D The multiplication of force

5  Why would this hydraulic system not be found in an actual hydraulic machine?


- A There isn't enough hydraulic fluid
- B The tube should be open on one end
- C The pistons shouldn't be identical in size
- D There should be more than two pistons

6  Which lever configuration is most similar to the hydraulic system pictured?

- A 
- B 
- C 
- D 





7 Which of the following traces the path of oil through a hydraulic machine in the correct order from left to right?

- A Pump, Tube, Tank, Actuator
- B Tank, Pump, Tube, Actuator
- C Actuator, Tube, Tank, Pump
- D Tube, Pump, Actuator, Tank

8  If the red parts on this machine are comparable to muscles, what are the green parts comparable to?

- A Blood
- B Lungs
- C Bones
- D Skin

9 Which of the following machines would be most likely to use a hydraulic motor, rather than a cylinder?

- A 
- B 
- C 
- D 

10 According to Pascal's Law, what happens when you apply pressure to a system of closed cylinders containing hydraulic fluid?

- A The force will be transferred to the widest cylinder
- B The force will be transferred to the narrowest cylinder
- C The force will be transferred to the longest cylinder
- D The force will be distributed evenly throughout the hydraulic fluid