

## Mechanical Systems

### Topic 3 - Energy, Friction, and Efficiency Practice Quiz

1. ( **Efficiency = work output / work input** ) A pulley system lifts a 100N load with a force of 20N. The input distance is 3m and the output distance is 0.5m. The efficiency of this pulley system is ...

**62.5%**

**75.0%**

**83.3%**

**92.75%**
2. Efficiency can be increased by reducing frictional force. A sport that tries to reduce frictional force by sweeping the ice in front of the rock is ...

**cycling**

**curling**

**rock climbing**

**ice sculpturing**
3. When a skater moves across an ice surface, a thin layer of water is created, allowing the skate blade to slide across the surface with little friction. This layer of water is produced by the pressure of the ....

**zamboni**

**atmospheric pressure**

**skate blade**

**ice temperature**

4. The process which transfers energy or power from one place to another is ' *energy ...*  
**conversion**

**transformation**

**transmission**

**convection**

5. Gymnasts rub chalk powder (called rosin) on their hands just prior to competing. They do this to ...  
**decrease friction**

**increase friction**

**increase efficiency**

**decrease efficiency**

**Check your**  
**Answers**

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