

Mix and Flow of Matter

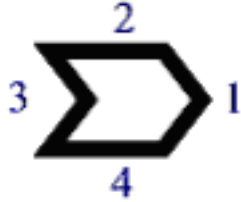
Topic 4 - Flow Rate and Viscosity Practice Quiz

1. The viscosity of liquids can be compared by observing their ...
 - A. clarity**
 - B. volume**
 - C. resistance to flow**
 - D. resistance to acceleration**

2. In order to increase the speed of flow of oil in a pipeline, the oil should be ...
 - A. heated**
 - B. cooled**
 - C. expanded**
 - D. compressed**

3. Fluid A has a flow rate of 10.5 ml, per second. Fluid B has a flow rate of 11.3 ml, per second. Compared to fluid A, fluid B is ...
 - A. more viscous**
 - B. less viscous**
 - C. more dense**
 - D. less dense**

4. Use the diagram below to answer the next question.



The shape shown here travels through a fluid. This shape would experience the most drag if it were moving in direction ...

- A. 1
- B. 2
- C. 3
- D. 4
5. When your dad or mom start the cold car in the morning, they may mention that the viscosity of the motor oil would be decreased by ...
- A. running the engine
- B. charging the battery
- C. changing the antifreeze
- D. replacing the thermostat
6. Steam is injected into tar sand formations to facilitate the extraction of oil. The oil separates from the sand so that it can be pumped out of the ground. The steam causes the oil to separate from the sand because viscosity ...
- A. decreases when there is an increase in water content
- B. increases when there is an increase in water content
- C. increases when there is an increase in temperature

D. decreases when there is an increase in temperature

[Check Answers](#)

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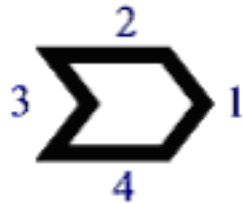
Topic 4 - Flow Rate and Viscosity Practice Quiz (Answers)

1. The viscosity of liquids can be compared by observing their ...
 - X **A. clarity**
 - X **B. volume**
 - C. resistance to flow (Text p. 40) The property that describes a liquid's thickness or thinness is called viscosity or resistance to flow**
 - X **D. resistance to acceleration**

2. In order to increase the speed of flow of oil in a pipeline, the oil should be ...
 - A. heated (Text p. 48) The viscosity of a liquid decreases as it is heated and therefore flow faster**
 - X **B. cooled**
 - X **C. expanded**
 - X **D. compressed**

3. Fluid A has a flow rate of 10.5 ml, per second. Fluid B has a flow rate of 11.3 ml, per second. Compared to fluid A, fluid B is ...
 - X **A. more viscous**
 - B. less viscous (Text p. 48) If the liquid flows faster, it is less viscous**
 - X **C. more dense**
 - X **D. less dense**

4. Use the diagram below to answer the next question.



The shape shown here travels through a fluid. This shape would experience the most drag if it were moving in direction ...

- X **A. 1**
- X **B. 2**
- C. 3 (Text p. 48) Friction is caused between the object moving through the water and the water, which is providing the resistance. If the object were travelling in direction 3 it would experience the most friction - resistance.**
- X **D. 4**

5. When your dad or mom start the cold car in the morning, they may mention that the viscosity of the motor oil would be decreased by ...
- A. running the engine To make the oil less viscous requires heat, which running the engine provides**
- X **B. charging the battery**
- X **C. changing the antifreeze**
- X **D. replacing the thermostat**
6. Steam is injected into tar sand formations to facilitate the extraction of oil. The oil separates from the sand so that it can be pumped out of the ground. The steam causes the oil to separate from the sand because viscosity ...
- X **A. decreases when there is an increase in water content**
- X **B. increases when there is an increase in water content**
- X **C. increases when there is an increase in temperature**
- D. decreases when there is an increase in temperature (Text p. 48) Viscosity of a liquid decreases when it is heated**