Free Mechanical Aptitude/Reasoning/ Comprehension Test Questions

(Questions only)

JobTestPrep invites you to a free practice session that represents only some of the materials offered in our online practice packs. Have a glimpse into the web's leading online psychometric preparation institute.

What does this test contain?

Ten Mechanical Reasoning questions

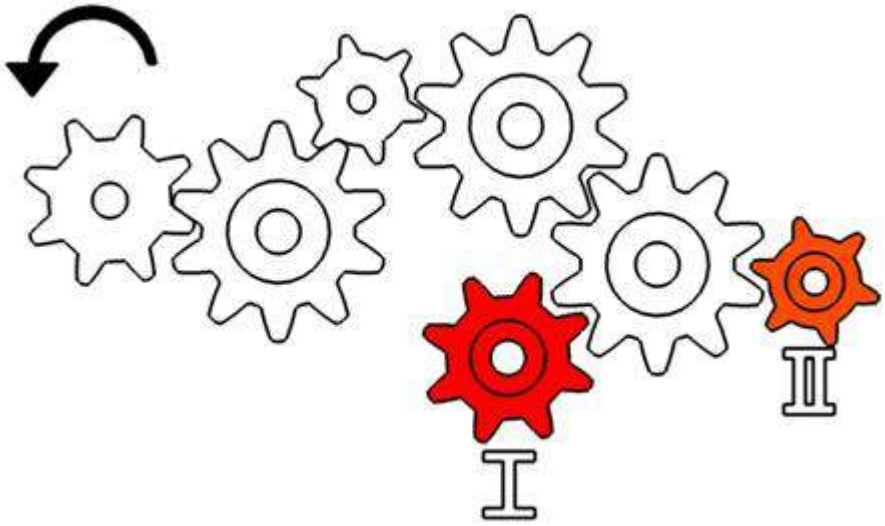
Full explanations of these mechanical questions here.

GOOD LUCK!

Job Test Prep

1- A system of cogwheels is shown in the diagram below:

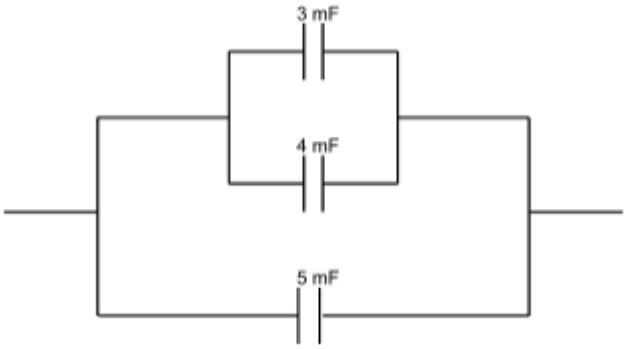
An external force turns the cogwheel on the extreme left in the given direction (counter clockwise). Which cogwheel will turn faster, the first one (I) or the second one (II)?



Choose an answer from the list below:

1. Cogwheel 1
2. Cogwheel 2
3. Both cogwheels will turn at the same speed
4. Impossible to answer

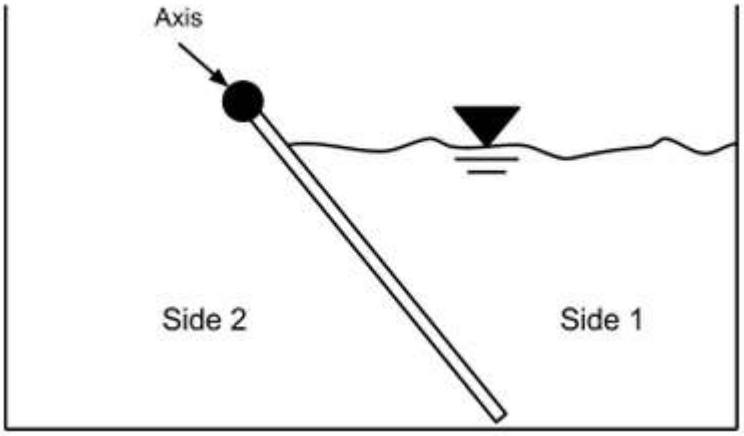
2- What is the capacitance of the equivalent capacitor (condenser) of the circuit shown in the diagram below?



Choose an answer from the list below:

1. 4mF
2. 3mF
3. 12Mf
4. 5mF
5. Impossible to answer

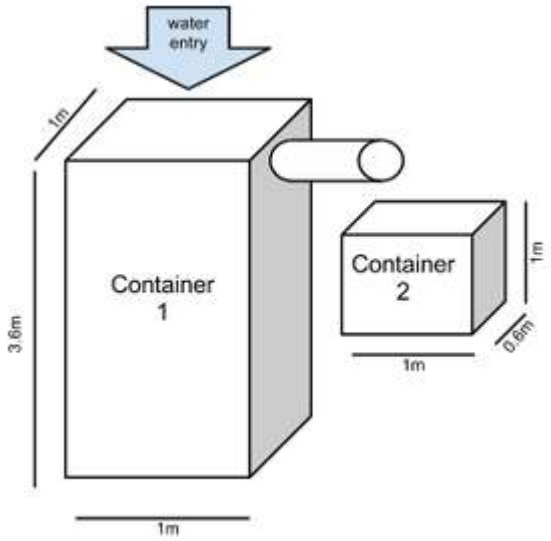
3- A water tank with a gate attached to an axis is shown in the diagram below. The weight of the gate is negligible. Is the system at equilibrium?



Choose an answer from the list below:

1. Yes
2. No
3. Cannot say

4- How long will it take for the second pool to become completely full, when using a tube withwith flow rate of 1 [liter/second] to fill it?



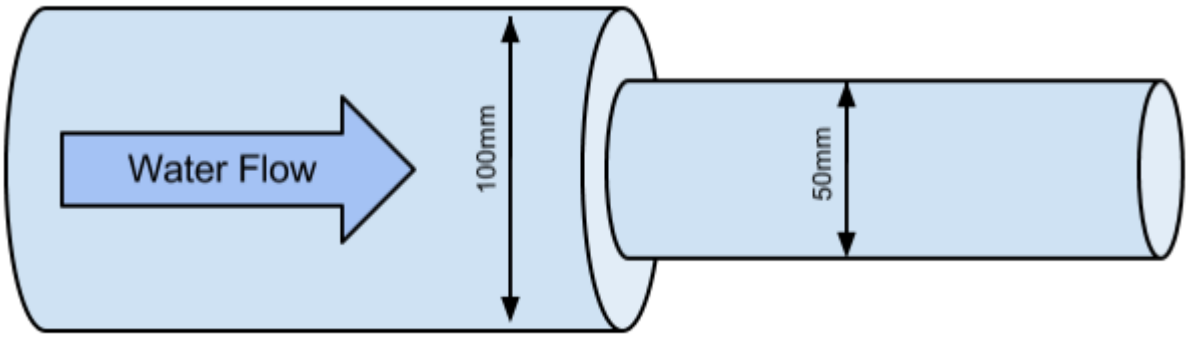
Choose an answer from the list below:

1. 10 minutes
2. 42 minutes
3. 70 minutes

5- The water flow is reversed.

How long will it take to fill a pool with a volume of 1000 liters when the large tube is removed?

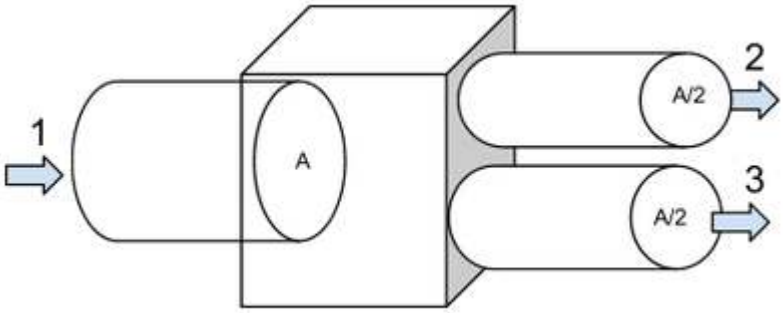
Given data: Rate of flow = 10 [liter/sec]



Choose an answer from the list below:

1. 50 seconds
2. 100 seconds
3. 200 seconds
4. 1000 seconds

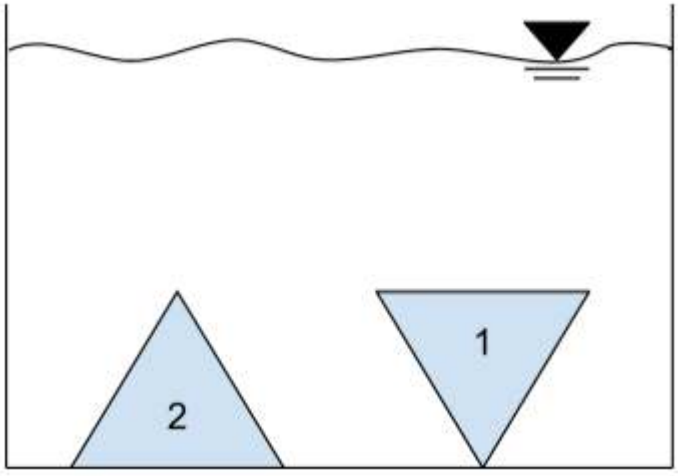
6- A tube is attached to the left hand side of a connector. Two tubes, situated one on top of the other, are connected to the right hand side. Water enters the system from the left tube, flows at a constant velocity through the connector, and exits via the two right hand tubes. At which opening is the velocity of water the greatest?



Choose an answer from the list below:

1. Opening 1
2. Opening 2
3. Opening 3
4. Opening 2 and 3
5. Same velocity at all openings

7- Two identical triangles are placed inside a water tank as shown in the diagram below. The triangles are fixed in position. On which triangle will a greater force be exerted?

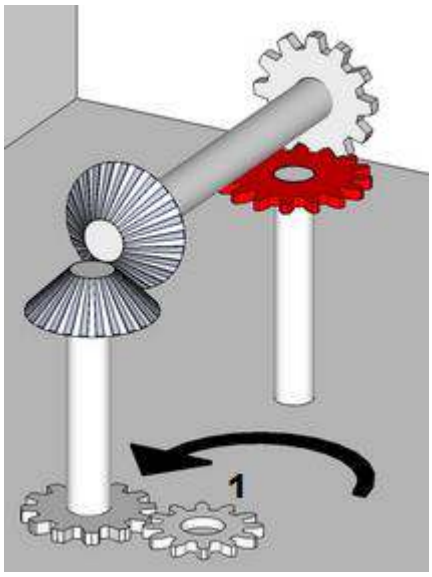


Choose an answer from the list below:

1. 1
2. 2
3. Equal on both
4. Cannot say

8- The grey cogwheel labelled 1 is being turned at a constant speed in a counter clockwise direction as shown in the diagram. The red cogwheel has 16 teeth whilst the rest of the cogwheels have 12 teeth.

Please choose the sentence which correctly describes the rotation of the red cogwheel in comparison to cogwheel 1.

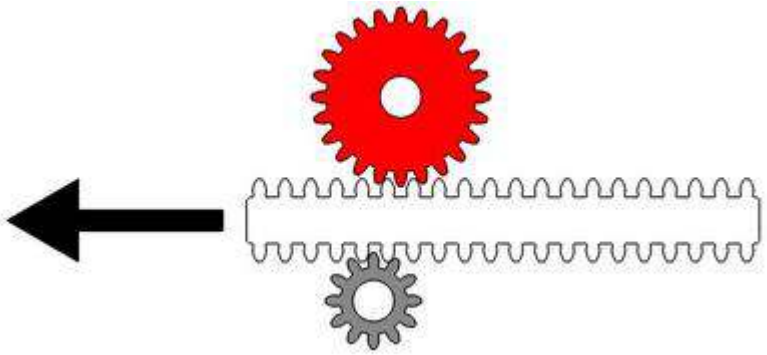


Choose an answer from the list below:

1. Clockwise, faster
2. Clockwise, slower
3. Counter clockwise, faster
4. Counter clockwise, slower
5. Counter clockwise, same speed

9- The diagram shows two fixed cogwheels which can only rotate around their own axis. A rack is inserted between the two cogwheels and is moved in the direction shown by the arrow.

What are the directions of movement and velocities of the cogwheels?

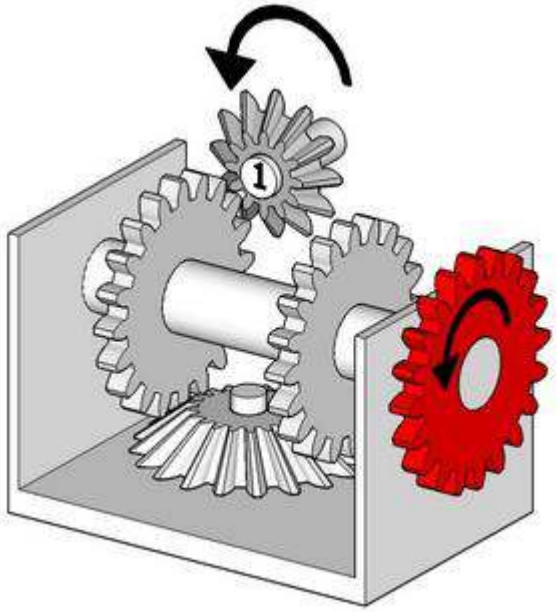


Choose an answer from the list below:

1. Same direction, same velocities
2. Same direction, different velocities
3. Different directions, same velocities
4. Different directions, different velocities

10- Cogwheel number 1 rotates counter clockwise as shown.

If the red cogwheel rotates in the direction of the arrow choose option 1; if it rotates in the opposite direction choose option 2; if the red cogwheel does not move at all choose option 3.



Choose an answer from the list below:

1. 1
2. 2
3. 3