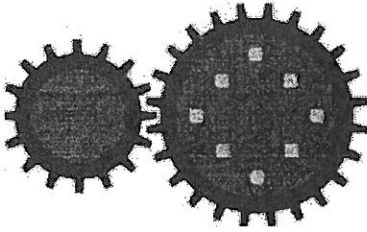
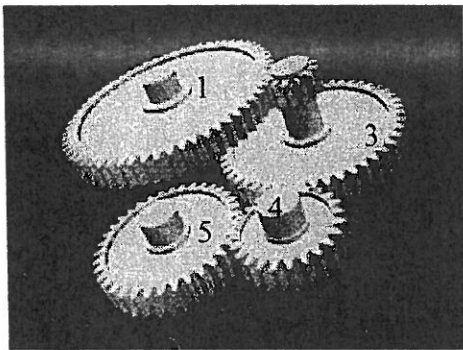


## Practice with Gears

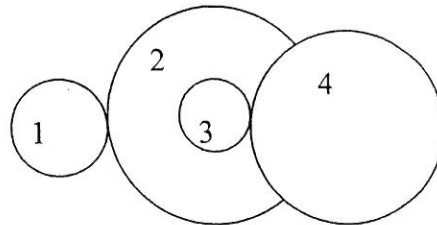
- 1) The gear on the left spins at 250 RPM clockwise. What is the speed and direction of the gear on the right?



- 2) Consider the gear train below. Gear #1 rotates clockwise. Give the direction of rotation of the other gears.

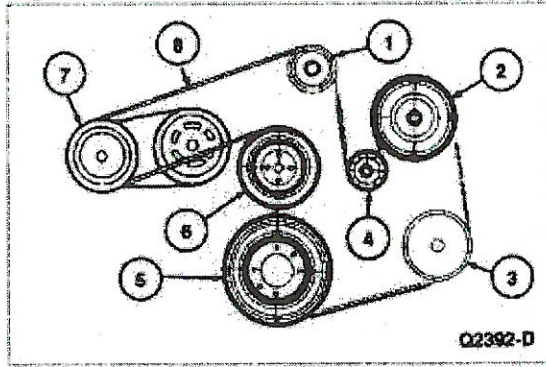


- 3) Consider the system of friction gears on the right.  
 Radius of gear #1 = 2.0 cm  
 Radius of gear #2 = 5.0 cm  
 Radius of gear #3 = 1.0 cm  
 Radius of gear #4 = 4.0 cm

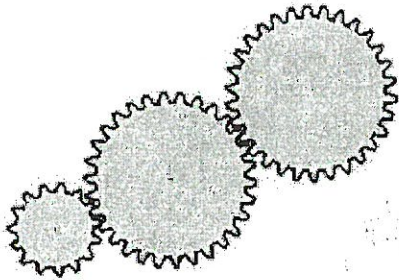


Gear #1 rotates clockwise at a speed of 400 RPM. Find the speed and direction of gears 2, 3 and 4.

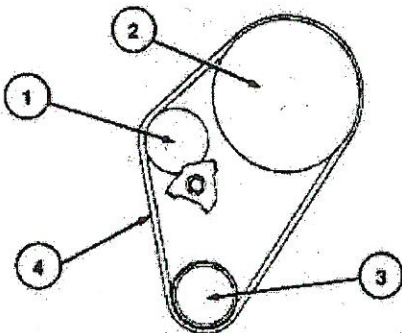
4) Consider the belt and pulley system below. Gear #1 rotates counterclockwise.



- a) Give the direction of rotation of all the labeled parts.
  - b) Which pulley will rotate the fastest?
  - c) Which pulley will rotate the slowest?
- 5) The center gear rotates at speed of 500 RPM. Determine the speed and direction of rotation of the other 2 gears.



- 6) Consider the belt and pulley system below.  
 Pulley #1 has a diameter of 50 mm  
 Pulley #2 has a diameter of 85 mm  
 Pulley #3 has a diameter of 50 mm



If pulley #3 rotates at a speed of 450 RPM. What is the speed of rotation of pulleys 1 and 2?