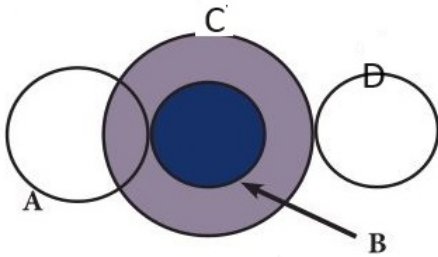


Name: Lucy

For the system of gears pictured, when gear A = 94 teeth, gear B = 38 teeth, gear C = 80 teeth, and gear D = 14 teeth, and the input speed is 74 rpm, what is the output speed (precision of 0.01)?



$$A \rightarrow B$$

$$\frac{94}{38} = \frac{47}{19}$$

$$\frac{47}{19} \cdot \frac{40}{7} = \frac{1880}{133}$$

$$C \rightarrow D$$

$$\frac{80}{14} = \frac{40}{7}$$

$$\frac{W_1}{W_2} = \frac{n_1}{n_2}$$

$$\frac{1880}{133} = \frac{74}{S_2} \quad \frac{(133 \cdot 74)}{1880} = S_2 = 5.24$$

$$\frac{47}{19} = \frac{74}{W_2}$$

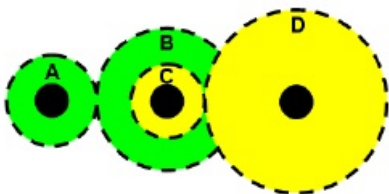
$$W_2 = 29.91$$

↑ input to C

$$\frac{80}{14} = \frac{29.915}{W_2}$$

$$W_2 = 5.24$$

For the system of gears pictured, when gear A = 34 teeth, gear B = 90 teeth, gear C = 24 teeth, and gear D = 24 teeth, and the input speed is 50 rpm, what is the output speed (precision of 0.01)?



A → B

$$\frac{34}{90}$$

$$\frac{34}{90} \times \frac{1}{1} = \frac{34}{90}$$

C → D

$$\frac{24}{24} = 1$$

$$\frac{W_1}{W_2} = \frac{n_1}{n_2}$$

$$\frac{50}{W_2} = \frac{34}{90}$$

$$\frac{(50 \cdot 90)}{34} = W_2$$

$$132.35$$

Write ONLY answers below this line \_\_\_\_\_

GRSSet67

a: 5.24

b: 132.35