The central distance between two shaft is 4 m having two pulleys..........

Question:

The central distance between two shaft is 4 m having two pulleys with diameter having 500 mm and 700 mm respectively.

Find length of belt required

(i) for open belt drive

(ii) for cross belt drive

Answer:

f) Problem on belt drive (02 marks each length)

i) for open belt

$$L = \pi/2 \, (d_1 + d_2) + 2x + (d_1 - d_2)^2 / 4x$$

$$= 9.8865 \text{ m}$$

ii) for cross belt

$$L = \pi/2 \, (d_1 + d_2) + 2x + (d_1 + d_2)^2 / 4x$$

$$= 9.974 \text{ m}$$