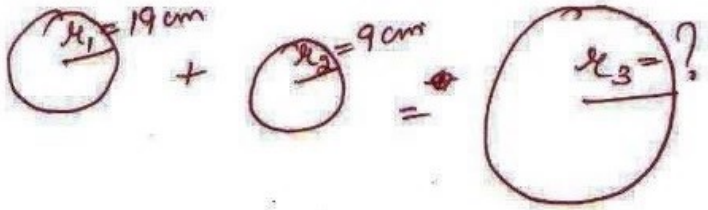
ex 12.1

① 

circum. of reqd ⊙ = circum of 2 given circles

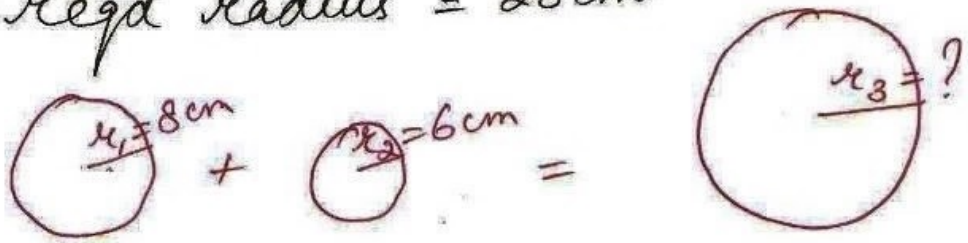
$$2\pi r_3 = 2\pi r_1 + 2\pi r_2$$

$$2\pi r_3 = 2\pi(r_1 + r_2)$$

$$= 19 + 9$$

$$= 28$$

reqd radius = 28cm

② 

area of reqd ⊙ = area of 2 given ⊙s

$$\pi r_3^2 = \pi r_1^2 + \pi r_2^2$$

$$\pi r_3^2 = \pi(8^2 + 6^2)$$

$$= 64 + 36$$

$$r_3 = \sqrt{100}$$

$$= 10\text{ cm}$$

∴ reqd. radius = 10 cm