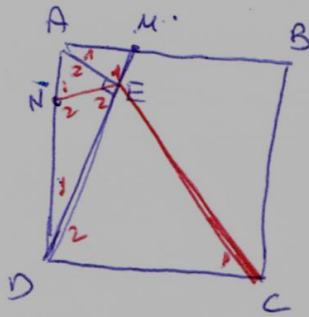


1.81



$$\begin{aligned} \angle A_1 &= \alpha && \text{[NO]} && \text{1.1} \\ \angle A_2 &= 90 - \alpha \\ \angle AME &= 90 - \alpha \\ \angle D_1 &= \angle ADE = \alpha \\ &\Downarrow \\ \triangle AME &\sim \triangle ADE && \text{(S.S.)} \\ \angle D_2 &= 90 - \alpha && \text{1.2} \end{aligned}$$

$$\left. \begin{aligned} \frac{AE}{DE} &= \frac{AM}{AD} \\ \frac{AM}{AD} &= \frac{AN}{DC} \end{aligned} \right\}$$

समान त्रिभुज

$$\frac{AE}{DE} = \frac{AN}{DC}$$

↓

(3.S.3) $\triangle DEC \sim \triangle AEN$

$$AE \cdot EC = DE \cdot EN \leftarrow \frac{AE}{DE} = \frac{EN}{EC} \quad \text{2. समान त्रिभुज} \quad \text{1.3}$$

$$\angle N_1 + \angle C_2 = 180^\circ \leftarrow \angle N_1 = \angle C_1 \quad \text{2. समान त्रिभुज} \quad \text{1.3}$$

समान त्रिभुज $\triangle N_1 E C D \leftarrow$

$$\angle D + \angle NEC = 180^\circ \leftarrow$$

$$\angle NEC = 90^\circ$$

$$ND = AD - AN = 4 - 1 = 3 \quad \text{समान त्रिभुज CN} \quad \text{1.2}$$

$$NC = \sqrt{ND^2 + DC^2} = \sqrt{3^2 + 4^2} = 5$$

$$R = \frac{1}{2} NC = 2\frac{1}{2}$$