

$$4. \quad \mathbf{s} = (\overline{1011}), \mathbf{t} = (\overline{01})$$

$$\begin{aligned} d[(\overline{1011}), (\overline{0101})] &= \left(1 + \frac{1}{2} + \frac{1}{4}\right) + \left(\frac{1}{16} + \frac{1}{32} + \frac{1}{64}\right) + \dots \\ &= \frac{7}{4} + \frac{7}{64} + \dots \\ &= 7 \cdot \frac{1/4}{1 - 1/16} \\ &= \frac{28}{15} \end{aligned}$$