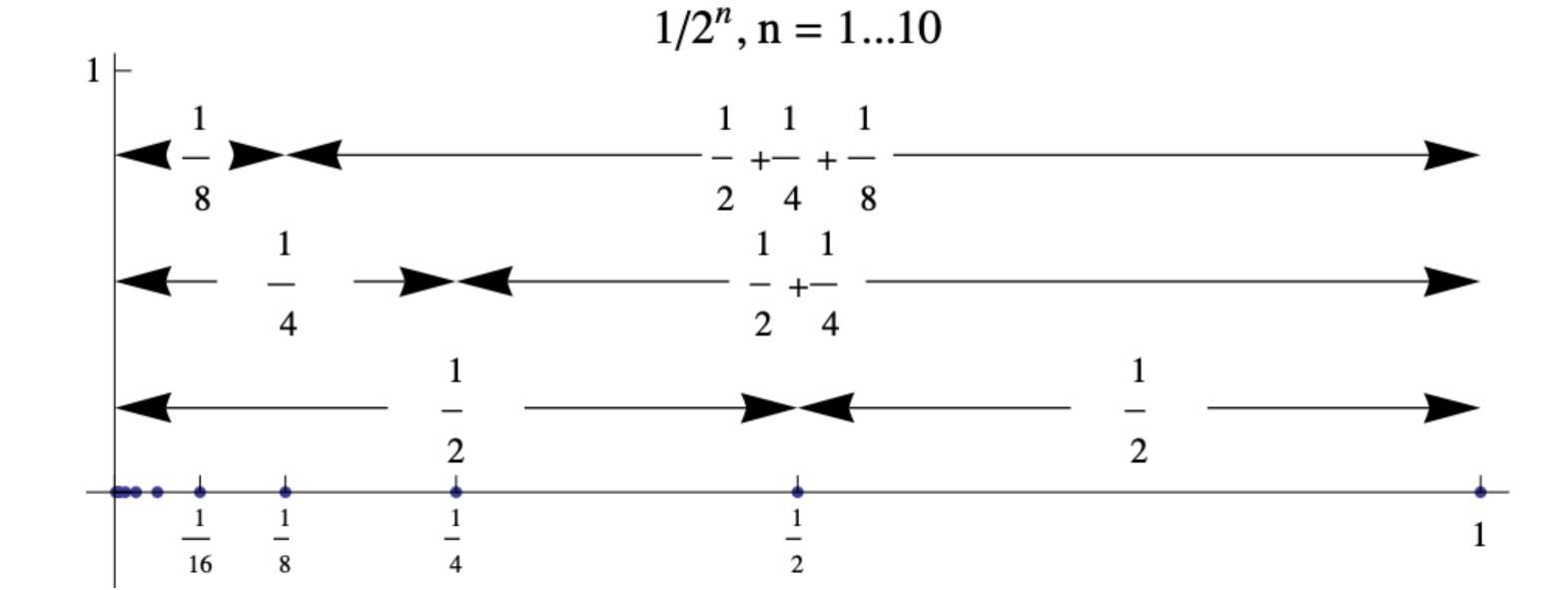
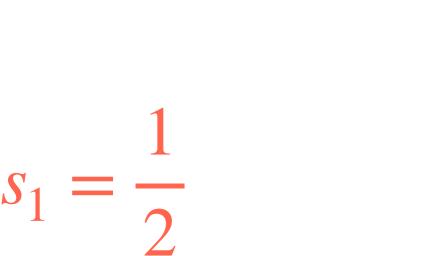


## determine convergence/divergence using limit of Sn







# $s_2 = \frac{1}{2} + \frac{1}{4}$

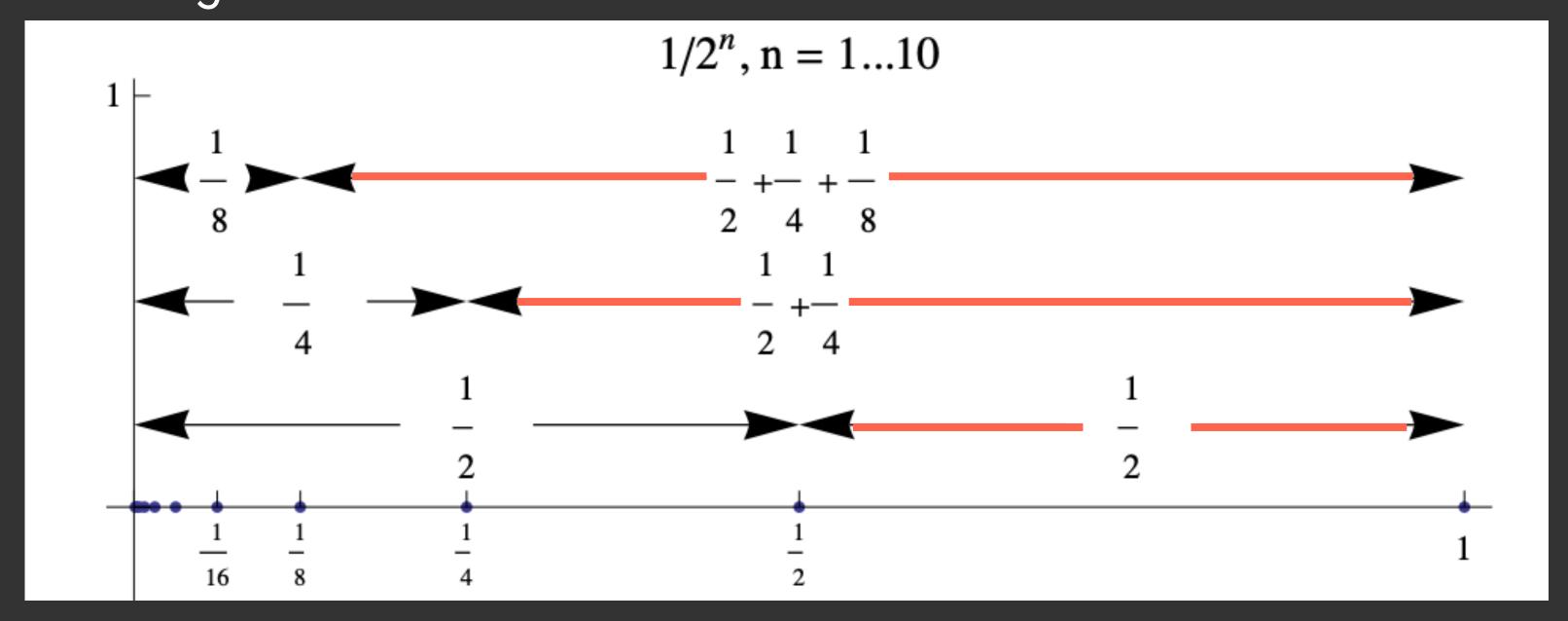
$$s_3 = \frac{1}{2} + \frac{1}{4} + \frac{1}{8}$$



### determine convergence/divergence using limit of Sn

#### example

Find the partial sums  $s_1, s_2, s_3, ..., s_n$  of the series  $\sum_{n=1}^{\infty} \frac{1}{2^n}$ . Find the sum of the series. Does the series converge?



$$s_1 = \frac{1}{2}$$

$$s_2 = \frac{1}{2} + \frac{1}{4}$$

$$s_3 = \frac{1}{2} + \frac{1}{4} + \frac{1}{8}$$

## determine convergence/divergence using limit if Sn

#### example

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