5

6 $\sum_{k=1}^{6} \frac{1}{3^{7-k}} = (1.37 \times 10^{-3})$

$+ (4.12 \times 10^{-3}) + (12.3 \times 10^{-3})$

$+ (37.0 \times 10^{-3}) + (111 \times 10^{-3})$

$+ (333 \times 10^{-3})$

$= (16.4 \times 10^{-3}) + (37.0 \times 10^{-3}) + \cdots$

$= (53.4 \times 10^{-3}) + (111 \times 10^{-3}) + \cdots$

$= (164 \times 10^{-3}) + (333 \times 10^{-3}) + \cdots$

$= \boxed{497 \times 10^{-3}}$