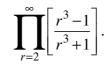**Question 9**

The product operator $\prod$, is defined as

$$\prod_{i=1}^{k}[u_i] \;=\; u_1 \times u_2 \times u_3 \times u_4 \times ... \times u_{k-1} \times u_k .$$

Evaluate, showing a clear method

$$\prod_{r=2}^{\infty}\left[\frac{r^3-1}{r^3+1}\right].$$

$$\boxed{\dfrac{2}{3}}$$