

The minimum value of $3^x + 3^{1-x}$ is $x \in R$:

- 1)1 2)2 3) $2\sqrt{3}$ 4) $\sqrt{3}$

SOLUTION :

AM \geq GM

The image shows a handwritten solution on a piece of paper. It starts with the expression $\frac{3^x + 3^{1-x}}{2}$ on the left, followed by a greater-than-or-equal-to symbol \geq and a square root expression $\sqrt{3^x \cdot 3^{1-x}}$. Below this, the expression $3^x + 3^{1-x}$ is written, followed by a greater-than-or-equal-to symbol \geq and the value $2\sqrt{3}$.

$$\frac{3^x + 3^{1-x}}{2} \geq \sqrt{3^x \cdot 3^{1-x}}$$
$$3^x + 3^{1-x} \geq 2\sqrt{3}$$