

Let the sum of money that's principal be x .

Time= 8 years

Amount after 8 years becomes double= $2x$

Therefore,

Simple interest=Amount -principal= $2x - x = x$

Rate per annum

$$= \frac{S.I \times 100}{P \times T} = \frac{x \times 100}{x \times 8} = \frac{100}{8} = \frac{25}{2} = 12.5\%$$

Then,

We get interest of 8years is 12.5%