- Silicon is essential to the computer industry as a major component of chips. It has three naturally occurring isotopes, the relative abundance of each being given below. Calculate the atomic mass of silicon.

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Isotope	Mass of isotope (a.m.u.)	Relative abundance
^{28}Si	27.9769	92.23%
^{29}Si	28.9765	4.67%
^{30}Si	29.9738	3.10%

The relative atomic mass of silicon is the weighted average of the masses of its isotopes:

$$\textbf{atomic mass} = \left(27.9769 \times \frac{92.23}{100} \right) + \left(28.9765 \times \frac{4.67}{100} \right) + \left(29.9738 \times \frac{3.10}{100} \right)$$

$$= 28.09$$

(The relative abundances are given to 4 significant figures and limit the accuracy of the answer.)

Answer: **28.09**