

Currency Conversion

Money conversion involves converting one currency to another using a given exchange rate.

Here's how the process typically works:

1 Find the Exchange Rate: The exchange rate is the rate at which one currency can be exchanged for another. For example, if the exchange rate is 1 USD = 0.75 GBP, this means 1 US Dollar can be exchanged for 0.75 British Pounds.

2 Convert From One Currency to Another: Use proportion to convert an amount from one currency to another.

For example:

If 1 US Dollar (USD) = 0.85 Euros (EUR), and you have \$100, how many Euros will you get?

$$\begin{aligned} \$: \text{€} &= 1 : 0.85 \\ \frac{\$}{\text{€}} &= \frac{1}{0.85} \rightarrow \frac{100}{x} = \frac{1}{0.85} \\ x &= 100 \times 0.85 \\ &= 85\text{€} \end{aligned}$$

Example

Alex change 190 euros (€) into pounds (£) when £1 = € 1.1723.

Calculate the amount Alex receives

$$£ : € = 1 : 1.1723$$

$$\frac{£}{€} = \frac{1}{1.1723} \rightarrow \frac{x}{190} = \frac{1}{1.1723}$$

$$x = \frac{190}{1.1723}$$

$$x = 162.0745543£$$

Many currencies will be rounded to two decimal places.

$$x = 162.07£$$



Example

Nina change 153 euros into dollars when the exchange rate is $\$1 = \text{€ } 0.9$

Calculate the amount Nina receives

$$\text{\$} : \text{\text{€}} = 1 : 0.9$$

$$\frac{\text{\$}}{\text{\text{€}}} = \frac{1}{0.9} \rightarrow \frac{x}{153} = \frac{1}{0.9}$$

$$x = \frac{153}{0.9}$$

$$x = 170\text{\$}$$

Example

If 1 USD = 0.75 GBP, how many GBP will you get for \$200?

$$\text{\$} : \text{\pounds} = 1 : 0.75$$

$$\frac{\text{\$}}{\text{\pounds}} = \frac{1}{0.75} \rightarrow \frac{200}{x} = \frac{1}{0.75}$$

$$x = 200 \times 0.75$$

$$= 150 \text{ \pounds}$$



Example

A tourist exchanges €500 to JPY at a rate of 1 EUR = 150 JPY.

How many Japanese Yen does the tourist receive?

$$\text{€} : \text{JPY} = 1 : 150$$

$$\frac{\text{€}}{\text{JPY}} = \frac{1}{150} \rightarrow \frac{500}{x} = \frac{1}{150}$$

$$x = 500 \times 150$$

$$= 75000 \text{ JPY}$$

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