

Question #46838, Chemistry, Physical Chemistry

The continent of South America is drifting away from Africa at a rate of about 25 mm/100 years. If South America started out touching Africa, how many years did it take for South America to get to its present location, which is 5000 km away from Africa?

Answer.

$$1 \text{ km} = 1000 \text{ m} = 100000 \text{ cm} = 10000000 \text{ mm} .$$

Thus,

$$T = \frac{5000 * 10000000}{\frac{25}{100}} = 200,000,000,000 = 2 * 10^{11} \text{ years}.$$