

A submarine left the surface of the water at the rate of -2 meters per second. At that rate, how long would it take the submarine to reach -60 meters level?

Solution:

Under conditions of the task moving the submarine is uniform.

Therefore its motion is described by the following equation:

$$l = v \cdot t,$$

where

l – distance travelled (m);

v – velocity (m/s);

t - time (s).

Then we have

$$l = v \cdot t,$$

where

l – level of the submarine (meters);

v – the rate (meters per second);

t - time (second).

Thus

$$-60 = -2 \cdot t,$$

$$t = \frac{-60}{-2},$$

$$t = 30 \text{ (seconds)}.$$

Answer: 30 (seconds).