

Gravity (m/s ²)	Period experimental (s)	Period Theoretical (s)
10	1.42	1.41
9	1.49	1.49
8	1.58	1.58
7	1.69	1.69
6	1.83	1.83

$$T = 2\pi \sqrt{L/g}$$

As gravity decreases, the period of the pendulum increases. This means the pendulum swings more slowly when the gravitational force is weaker. There is an inverse square root relationship between gravity and the period.

$$T = 2\pi \sqrt{L/g} = 2\pi \sqrt{.5/6} = 2\pi(0.2887) = 1.81s$$

The period would be approximately 1.81 seconds.