Системы уравнений

$$a(t) = -g$$

$$v(t) = -a(t) * t + v_0$$

$$s(t) = -\frac{a(t) * t^2}{2} + v_0 * t + s_0$$

Формула в логике предикатов

```
free_fall:equation[initial_velocity -> 0,
        initial_distance -> 5000, time -> 10]
free_fall[?velocity]
```

Кортежи базы данных

(t, velocity, distance)

(0, 0.0, 5000.0)

(1, -9.8, 4995.1)

(2, -19.6, 4980.4)

(3, -29.4, 4955.9)

(4, -39.2, 4921.6)

Алгоритм

```
def free_fall(a=9.8, t=10, init_velocity=0, init_dist=5000):
    velocity = -a * t + init_velocity
    distance = - a/2 * (t ** 2) + init_velocity * t + init_dist
    print(t, velocity, distance)
    return t, velocity, distance

free_fall()
```