

What is  $f_s$ , max for sliding a 0.65 kg glass amulet on a glass display case?

**Solution.**

$$m = 0.65\text{kg}, g = 9.8 \frac{\text{m}}{\text{s}^2};$$

$$F_f - ?$$

The force of friction is:

$$F_f = \mu F_n;$$

$\mu$  - the coefficient of friction;

$F_n$  - the normal force.

$$F_n = mg.$$

The coefficient of friction max for sliding a glass amulet on a glass display case is  $\mu = 0.9$ .

$$F_f = \mu mg.$$

The force of friction is:

$$F_f = 0.9 \cdot 0.65\text{kg} \cdot 9.8 \frac{\text{m}}{\text{s}^2} = 5.7\text{N}.$$

**Answer:** The force of friction is  $F_f = 5.7\text{N}$ .