

ES 6

$$T = 36 \text{ min} = 5760 \text{ s}$$

$$r = 6380 \text{ km} + 588 \text{ km} = 6968 \text{ km} = 6968000 \text{ m}$$

$$v = ?$$

$$a = ?$$

$$v = \frac{2\pi r}{T} = \frac{2\pi \cdot 6968 \cdot 10^3 \text{ m}}{57,60 \cdot 10^2 \text{ s}} = 7,6 \cdot 10^3 \frac{\text{m}}{\text{s}}$$

$$a = \frac{v^2}{r} = \frac{\left(7600 \frac{\text{m}}{\text{s}}\right)^2}{6968000 \text{ m}} = 8,2 \frac{\text{m}}{\text{s}^2}$$