

# Notes

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# 1 Section 1

## 1.1 Subsection 1

Static friction:

$$F_{smax} = \mu_s F_N$$

where  $F_{smax}$  is the maximum static friction ,  $\mu_s$  is the coefficient of static friction and  $F_N$  is the normal force perpendicular to the static friction force.

$$F_{smax} = \mu_s F_N$$

$$\mu_s = F_{smax} / F_N$$

$$= F_{smax} / 9.8m$$

where m is the mass of the load

$$= \frac{5.061N}{0.7858kg * 9.8m/s^2}$$

$$\mu_s = 0.65$$

## 1.2 Subsection 2



Figure 1: *Dark souls*

Range	Resolution
$\pm 10 \text{ N}$	0.01 N
$\pm 50 \text{ N}$	0.05 N

Table 1: *Simple table*

## 2 Section 2

### 2.1 Subsection 1

#### Definition of terms

- Amplitude ( $A$ ) is the difference in height from highest (maximum) to lowest (minimum) point divided by 2 within a single period ( $T$ ). In other words, it is the function of the magnitude of the difference between the variables extreme values.
- Period ( $T$ ) denotes a single complete cycle of a periodic motion. Second ( $s$ ) is the most common unit used.  $T = \frac{1}{f}$

- Frequency  $f$  describes how many times an event occurs in a single unit of time. In physics, frequency is most often applied to waves. It is denoted in Hertz ( $Hz$ ).  $f = 1/T$
- Angular frequency ( $\omega$ ) measures angular displacement (radians) per unit time (seconds).
- Kinematics of a periodic harmonic motion
  - Displacement ( $x$ ),  $x = A\sin(\omega t)$
  - Velocity ( $v$ ),  $v = A\omega\cos(\omega t)$ ,  $v = \pm\omega\sqrt{A^2 - x^2}$
  - Acceleration ( $a$ ),  $a = -A\omega^2\sin(\omega t)$

## 2.2 Subsection 2

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.