

# 1 Test the isomath Package

Fontpackage: [utopia]{mathdesign}

Isomath called with options: [OMLmathsans,OMLmathbf,sfdefault=cmb]r

Default font families:                serif    mdput    sans-serif    cmss  
    isomath-serif    mdput    isomath-sf    cmb

## 1.1 Math alphabets

If there are ligatures (ff, fi, ...) or other "strange" symbols instead of small Greek letters in a math alphabet, it uses T1 or OT1 encoding instead of OML.

mathnormal	<i>A, B, C, Γ, Δ, Θ, Λ, Ξ, Π, Σ, Υ, Φ, Ψ, Ω, α, β, γ, ω, ν, w, a, g,</i>
mathit	<i>A, B, C, ` , ^ , ~ , ¨ , ° , ˇ , ˘ , ˙ , ˚ , !, v, w, a, g,</i>
mathrm	<i>A, B, C, Γ, Δ, Θ, Λ, Ξ, Π, Σ, Υ, Φ, Ψ, Ω, α, β, γ, ω, ν, w, a, g,</i>
mathbf	<b><i>A, B, C, Γ, Δ, Θ, Λ, Ξ, Π, Σ, Υ, Φ, Ψ, Ω, α, β, γ, ω, ν, w, a, g,</i></b>
mathsf	<i>A, B, C, ` , ^ , ~ , ¨ , ° , ˇ , ˘ , ˙ , ˚ , !, v, w, a, g,</i>
mathtt	<i>A, B, C, ` , ^ , ~ , ¨ , ° , ˇ , ˘ , ˙ , ˚ , !, v, w, a, g,</i>

New alphabets bold-italic, sans-serif-italic, and sans-serif-bold-italic.

mathbold	<b><i>A, B, C, Γ, Δ, Θ, Λ, Ξ, Π, Σ, Υ, Φ, Ψ, Ω, α, β, γ, ω, ν, w, a, g,</i></b>
mathsans	<i>A, B, C, Γ, Δ, Θ, Λ, Ξ, Π, Σ, Υ, Φ, Ψ, Ω, α, β, γ, ω, ν, w, a, g,</i>
mathbolsans	<b><i>A, B, C, Γ, Δ, Θ, Λ, Ξ, Π, Σ, Υ, Φ, Ψ, Ω, α, β, γ, ω, ν, w, a, g,</i></b>

## 1.2 Vector symbols

Symbols for vectors are boldface italic:  $\alpha = e_1 \cdot a$

## 1.3 Matrix symbols

Symbols for matrices are boldface italic, i. e. typeset in the same face as vectors:<sup>1</sup>  
 $F = E \cdot A$ .

## 1.4 Tensor symbols

Symbols for tensors are sans-serif bold italic,

$$\alpha = e \cdot a \iff \alpha_{ijl} = e_{ijk} \cdot a_{kl}.$$

The permittivity tensor describes the coupling of electric field and displacement:

$$D = \epsilon_0 \epsilon_r E$$

---

<sup>1</sup>However, matrix symbols are usually capital letters whereas vectors are small ones. Exceptions are physical Quantities like the force vector  $F$  or the electrical field  $E$ .