

Transformation Ellipsoid Koordinaten \leftrightarrow Kart. Koord.

1) $\varphi, \lambda, H \rightarrow x, y, z$ (Formel 1.11)

a) Bessel-Ellipsoid $a = 6\,377\,397,155\text{ m}$
 $b = 6\,356\,078,963\text{ m}$

Punkt P : $\varphi = 10^\circ 18'$
 $\lambda = 79^\circ 45'$
 $H = 200,000\text{ m}$ } Indien

$c =$ $e^2 =$

$e'^2 =$ $v =$

$x = 1\,116\,683,291\text{ m}$
 $y = 6\,175\,339,494\text{ m}$
 $z = 1\,132\,838,626\text{ m}$ } Lösung

2) $x, y, z \rightarrow \varphi, \lambda, H$ (Formeln 1.12 - 1.14)

b) GRS 80 - Ellipsoid $a = 6\,378\,137,000\text{ m}$
 $b = 6\,356\,752,314\text{ m}$

Punkt Q : $x = 4\,083\,364,416\text{ m}$
 $y = 1\,183\,322,147\text{ m}$
 $z = 4\,739\,225,329\text{ m}$

Lösung: $\lambda = 16^\circ 09' 40,0000''$
 $\varphi = 48^\circ 17' 50,0000''$
 $H = 400,001\text{ m}$