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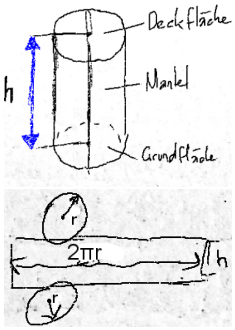
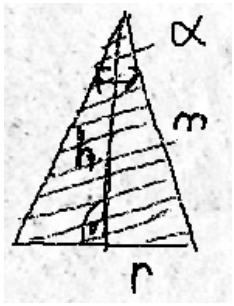
6MT13v

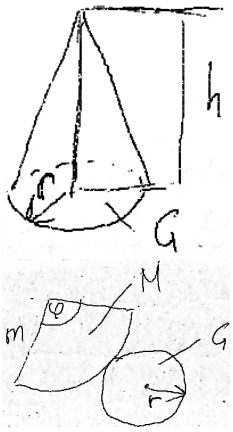
# 1 Kreisyzlinder




**Mantelfläche:**
$M = h * 2\pi r$
**Grundfläche**
$G = \pi r^2$
**Gesamte Fläche:**
$S = M + 2G$
**Volumen:**
$V = G * h$

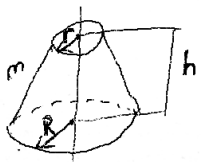
# 2 Kreiskegel




**Mantelfläche:**
$M = \pi r m$
**Gesamtfläche:**
$S = \pi r(r + m)$
**Volumen:**
$V = \frac{1}{3}Gh = \frac{\pi}{3}r^2h$
**Relationen**
$\widehat{\phi} = \frac{2\pi r}{m}$

# 3 Kegelstumpf



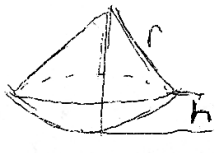

**Der gerade Kegelstumpf**
$V = \frac{\pi}{3}h(r^2 + R^2 + Rr)$
**Mantelfläche**
$M = \pi m(r + R)$

# 4 Kugel

## 4.1 Ganze Kugel

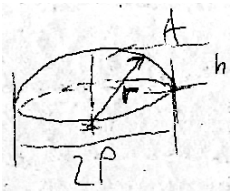
$V = \frac{4\pi}{3}r^3$
$S = 4\pi r^2$

## 4.2 Kugelsektor



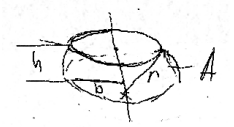

$V = \frac{2\pi}{3}r^2h$

## 4.3 Kugelsegment



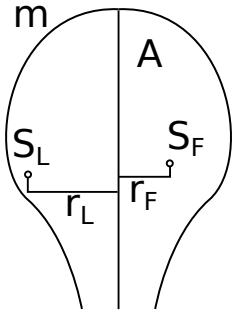

$V = \frac{\pi}{3}h^2(3r - h)$
$V = \frac{pi}{6}h(3\rho^2 + h^2)$
$S = A + \pi\rho^2$
$A = 2\pi rh$

## 4.4 Kugelschicht



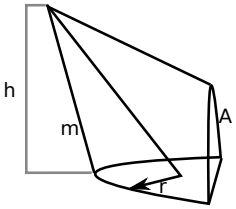

$V = \frac{\pi}{6}h(3a^2 + b^2 + h^2)$
$S = A + \pi(a^2 + b^2)$
$A = 2\pi rh$

# 5 Guldnische Regeln




$V = 2\pi r_F A$
$M = 2\pi r_L m$
**Flächenschwerpunkt Dreieck**
$x_S = \frac{x_1+x_2+x_3}{3}$
$y_S = \frac{y_1+y_2+y_3}{3}$

# 6 Ähnliche Körper




$k = \frac{h'}{h} = \frac{r'}{r} = \frac{m'}{m}$
$k^2 = \frac{G'}{G} = \frac{M'}{M} = \frac{A'}{A} = \frac{S'}{S}$
$V = \frac{V'}{V}$