# Formelblad TATB 04

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## 1 Del 1

### 1.1 Summa formler

$$\sum_{k=1}^{n} a = a \cdot n$$

$$\sum_{k=1}^{n} ak = a \cdot \frac{n(n+1)}{2}$$

$$\sum_{k=1}^{n} ak^2 = a \cdot \frac{n(n+1)(2n+1}{6}$$

$$\sum_{k=1}^{n} ??????a \cdot r^{k-1} = a \cdot \frac{r^n - 1}{r - 1}$$

## 2 Trigometriska Formler

### 2.1 Trigometrisk addition

$$Sin^2v + Cos^2v = 1$$

$$Sin(u+v) = Sin(u)Cos(v) + Cos(u)Sin(v)$$

$$Sin(u-v) = Sin(u)Cos(v) - Cos(u)Sin(v)$$

$$Cos(u+v) = Cos(u)Cos(v) - Sin(u)Sin(v)$$

$$Cos(u-v) = Cos(u)Cos(v) + Sin(u)Sin(v)$$

$$Cos(2v) = Cos^2(v) - Sin^2(v) = 2Cos^2(v) - 1 = 1 - 2Sin^2(v)$$

## 2.2 Sinussatsen

$$\frac{sinA}{a} = \frac{sinB}{b} = \frac{sinC}{c}$$

## 2.3 Cosinussatsen

$$a^2 = b^2 + c^2 - 2bcCosA$$

## 2.4 Areasatsen

$$T = \frac{abSinC}{2}$$