

3.7 Parallelogram

Sides of a parallelogram: a, b

Diagonals: d_1, d_2

Consecutive angles: α, β

Angle between the diagonals: φ

Altitude: h

Perimeter: L

Area: S

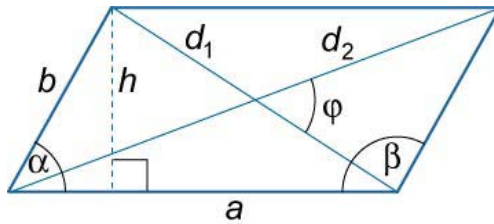


Figure 18.

205. $\alpha + \beta = 180^\circ$

206. $d_1^2 + d_2^2 = 2(a^2 + b^2)$

207. $h = b \sin \alpha = b \sin \beta$

208. $L = 2(a + b)$

209. $S = ah = ab \sin \alpha,$

$$S = \frac{1}{2} d_1 d_2 \sin \varphi.$$