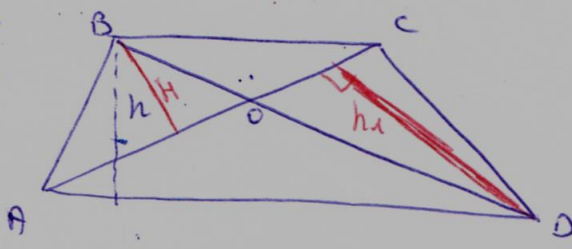


3.43
4



$$S_{\triangle ABD} = \frac{h \cdot AD}{2} \quad S_{\triangle ACD} = \frac{h_1 \cdot AD}{2} \quad \cdot 10$$

$$S_{\triangle ABD} - S_{\triangle AOD} = S_{\triangle ACD} - S_{\triangle AOD}$$

$$S_{\triangle ABO} = S_{\triangle CDO}$$

$$\frac{S_{\triangle AOB}}{S_{\triangle BOC}} = \frac{\frac{h \cdot AO}{2}}{\frac{h_1 \cdot OC}{2}} = \frac{AO}{OC} \quad \cdot 10$$

$$\frac{S_{\triangle AOD}}{S_{\triangle COD}} = \frac{\frac{h_1 \cdot AO}{2}}{\frac{h_1 \cdot CO}{2}} = \frac{AO}{CO} \quad \left. \begin{array}{l} \frac{S_{\triangle AOB}}{S_{\triangle BOC}} = \frac{AO}{OC} = \frac{S_{\triangle AOD}}{S_{\triangle COD}} \end{array} \right\}$$

$$x = S_{\triangle ABO} = S_{\triangle CDO} \quad \cdot 10$$

$$\frac{x}{b} = \frac{a}{x} \quad \Leftrightarrow \quad \frac{S_{\triangle AOB}}{S_{\triangle BOC}} = \frac{S_{\triangle AOD}}{S_{\triangle COD}} \quad \cdot 10$$

$$x = \sqrt{ab}$$

$$S_{ABCD} = 2\sqrt{ab} + a + b = (\sqrt{a} + \sqrt{b})^2$$