



$\triangle AKB$ прямоугольный

$$AK = \frac{AD - BC}{2} = \frac{22 - 12}{2} = 5$$

$$BK = \sqrt{AB^2 - AK^2} = \sqrt{13^2 - 5^2} = \sqrt{169 - 25} = 12$$

$$S_{ABCD} = \frac{BC + AD}{2} \cdot BK$$

$$S_{ABCD} = \frac{12 + 22}{2} \cdot 12 = 204$$