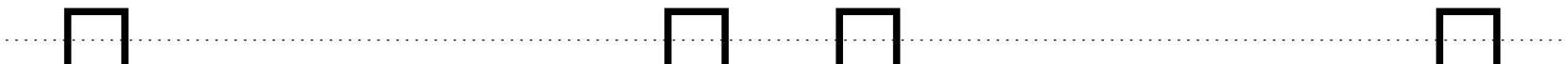
$\alpha d_{\min}$
$(2+\alpha)d_{\min}$