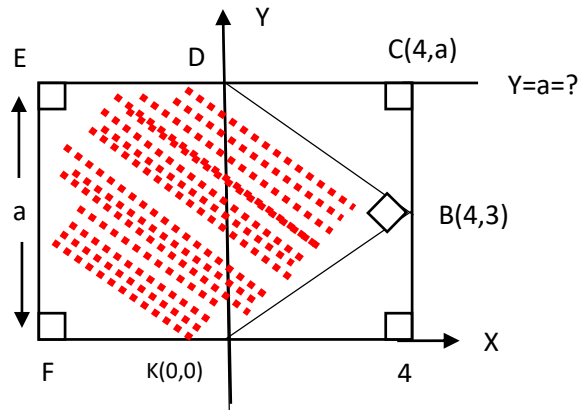
Slopes and lines



ACEF is a square

a is the side of the square

$\measuredangle$ B = 90^0 , ED = DC

The slope of BK is $\frac{3}{4}$, $\measuredangle$ B = 90^0

The slope of BD $-\frac{4}{3}$: B (4,3) $-\frac{4}{3}$

$y - 3 = -\frac{4}{3}(x - 4)$

D $(4 - \frac{a}{2}, a)$

$a - 3 = -\frac{4}{3}(4 - \frac{a}{2} - 4)$

$-3(a - 3) = 4(-\frac{a}{2})$

$3(a - 3) = 2a$

$3a - 9 = 2a$

$a = 9$