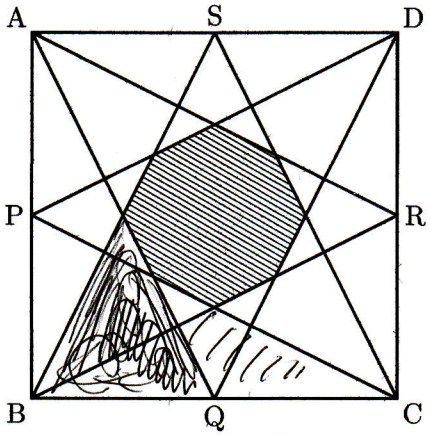
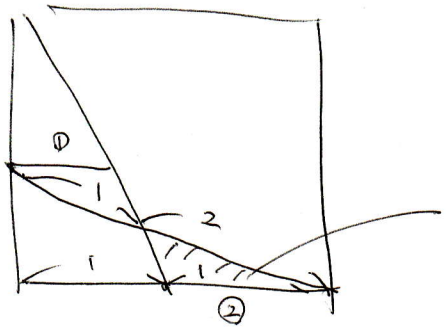
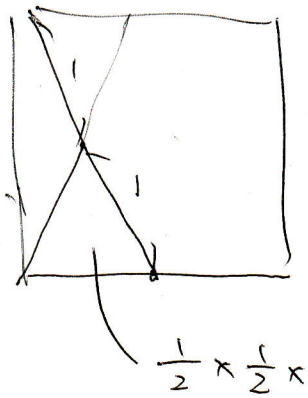
右の正方形ABCDの1辺は10cmで、各辺の中点をそれぞれP,Q,R,Sとし図のように各頂点と結ぶ。このとき、各線分で囲まれた斜線部分の面積を求めなさい。





$\frac{1}{2} \times \frac{1}{2} \times \frac{1 \times 2}{2 \times 3} = \frac{1}{12}$



$\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} = \frac{1}{8}$

$100 - 100 \times 4 \times \left(\frac{1}{12} + \frac{1}{8}\right)$

$= 100 - 100 \times 4 \times \frac{5}{24}$

$= 100 - \frac{250}{3}$

$= \frac{50}{3}\ \text{cm}^2$