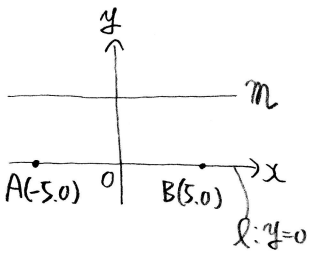


xy座標を考えた

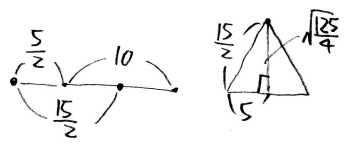
lの方程式をy=0, A, Bの座標を(-5, 0), (5, 0)とす。

15
x15
75
15
225



Ax+Bx=15を満たす点xの集合は

楕円, $\frac{x^2}{225} + \frac{y^2}{125} = 1$, $\frac{x^2}{9 \cdot 25} + \frac{y^2}{5 \cdot 25} = 1$, $\frac{x^2}{9} + \frac{y^2}{5} = \frac{25}{4}$



$y^2 + 25 = \frac{25}{4}$, $y^2 = \frac{25}{4}$

これとy=k (0 ≤ k ≤ 5/√5)の交点のx座標は

$\frac{x^2}{9} + \frac{k^2}{5} = \frac{25}{4}$, $x^2 = 9(\frac{25}{4} - \frac{k^2}{5})$ より $\pm 3\sqrt{\frac{25}{4} - \frac{k^2}{5}}$

$3\sqrt{\frac{25}{4} - \frac{k^2}{5}} = \frac{5}{2}$ のとき $\frac{25}{4} - \frac{k^2}{5} = \frac{25}{36}$, $25 \frac{9-k^2}{36} = \frac{k^2}{5}$, $k^2 = \frac{250}{9}$, $k = \frac{5}{3}\sqrt{10}$

よって $\frac{5}{3}\sqrt{10}x - 11L$