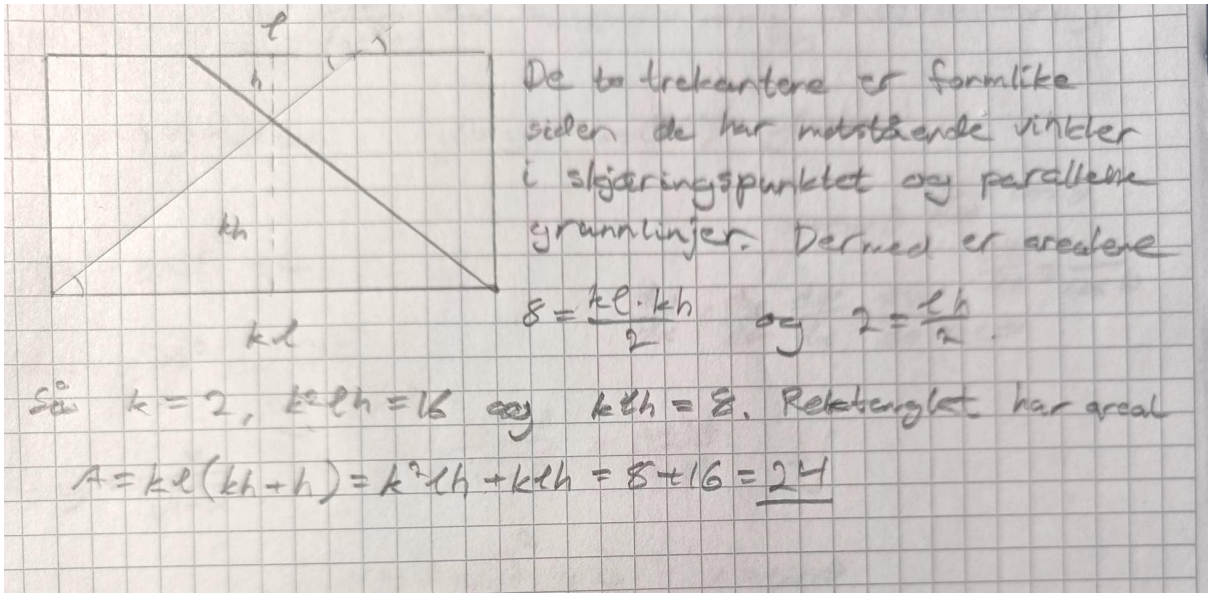
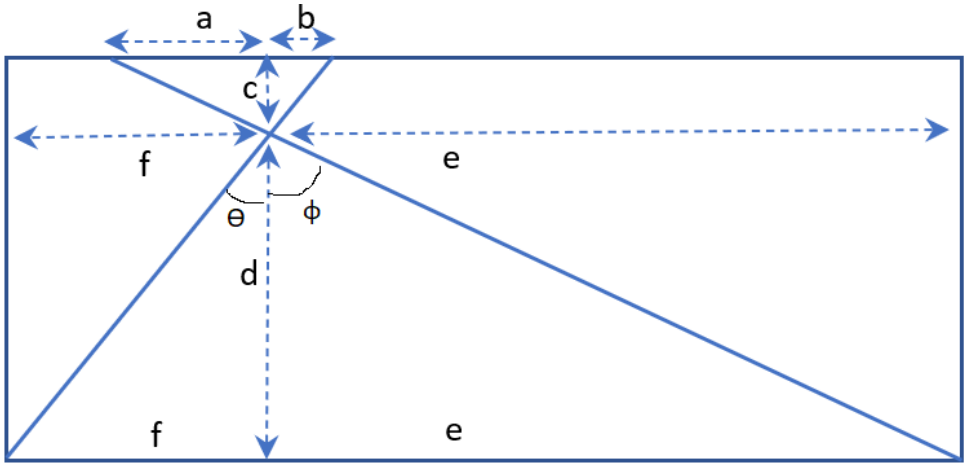
IFT-Posten: Math Puzzle 6 solution (week 45, 2022)

Olav Kalbein's solution



Rachid Maad's solution



L = f + e
H = c + d
d*L = 2 * arealet av den store trekanten = 2*8 =16 (1)
(a+b)*c = 2 * arealet av den lille trekanten = 2*2 = 4
så a+b = 4/c (2)
tan(Θ) = b/c
tan(Θ) = f/d så b/c = f/d (3)
tan(ϕ) = a/c
tan(ϕ) = e/d så a/c = e/d (4)
(3) + (4): (a+b)/c = (e+f)/d = L/d (5)
(2) og (5): $4/c^2$ = L/d så c = sqrt(4*d/L)
c*L = sqrt(4*d/L) * L= sqrt(4*d*L) = sqrt(4*16) = 8
Arealet er H*L = (c+d)*L = 8 + 16 = 24