

: 1

$OJ=OI=1,5$ (OI) (OJ) (O,I,J)
 x_C $OC=IJ$ (OI) C $B=S_{(OI)}(A)$ $A\left(\sqrt{10}; \frac{-7}{3}\right)$ - (1)
 $C(-\sqrt{2}; 0)$ B -
 . F A (OI) C (OI) ABC -
 . F (OI) $(OI) \cap [AB] = \{H\}$ - (2)
 AFCH $B' \in (AF)$ $B'=S_0(B)$ -

: 2

$Z = |b-a| + |a+b| + 3,7$ $Y = \left(-a + \frac{21}{5}\right) - (-b - \sqrt{2})$ $X = -0,7 - a - b - \sqrt{2}$
 $a-b=1+\sqrt{2}$ $a+b=3-\sqrt{2}$: b a
 Z Y X (1)
 $X+Y+Z=7,2$: (2)

: 3

$OI=1,8$ (O,I) Δ
 $x_D = -\sqrt{2}$ $x_C = 3 + \sqrt{2}$ $x_B = \frac{3}{2}$ $x_A = -\frac{8}{3}$ A B C D (1)
 . AD AB (2)
 . [AB] E x_E (3)
 $\frac{7}{12}$ E' (4)
 x_F $CF=5$ F x_F (5)

: 4

$a+b = -0,75$: b :
 $Y = \left(a + \frac{21}{4}\right) + (-\sqrt{2})$ $X = (0,5 + \sqrt{2}) + (-5 + b)$
 Y X