l2\*cos(a1)\*cos(a2)+l3\*cos(a1)\*cos(a2)\*cos(a3)-l3\*cos(a1)\*sin(a2)\*sin(a3)

l2\*cos(a2)\*sin(a1)+l3\*cos(a2)\*cos(a3)\*sin(a1)-l3\*sin(a1)\*sin(a2)\*sin(a3)

l1+l2\*sin(a2)+l3\*cos(a2)\*sin(a3)+l3\*cos(a3)\*sin(a2)

(fy\*cos(a1))/(l2\*cos(a1)$2\*cos(a2)+l2\*cos(a2)\*sin(a1)$2+l3\*cos(a1)$2\*cos(a2)\*cos(a3)+l3\*cos(a2)\*cos(a3)\*sin(a1)$2-l3\*cos(a1)$2\*sin(a2)\*sin(a3)-l3\*sin(a1)$2\*sin(a2)\*sin(a3))-(fx\*sin(a1))/(l2\*cos(a1)$2\*cos(a2)+l2\*cos(a2)\*sin(a1)$2+l3\*cos(a1)$2\*cos(a2)\*cos(a3)+l3\*cos(a2)\*cos(a3)\*sin(a1)$2-l3\*cos(a1)$2\*sin(a2)\*sin(a3)-l3\*sin(a1)$2\*sin(a2)\*sin(a3))

(fz\*(cos(a2)\*sin(a3)+cos(a3)\*sin(a2)))/(l2\*cos(a2)$2\*sin(a3)+l2\*sin(a2)$2\*sin(a3))-(fx\*cos(a1)\*(sin(a2)\*sin(a3)-cos(a2)\*cos(a3)))/(l2\*sin(a1)$2\*sin(a2)$2\*sin(a3)+l2\*cos(a1)$2\*cos(a2)$2\*sin(a3)+l2\*cos(a1)$2\*sin(a2)$2\*sin(a3)+l2\*cos(a2)$2\*sin(a1)$2\*sin(a3))-(fy\*sin(a1)\*(sin(a2)\*sin(a3)-cos(a2)\*cos(a3)))/(l2\*sin(a1)$2\*sin(a2)$2\*sin(a3)+l2\*cos(a1)$2\*cos(a2)$2\*sin(a3)+l2\*cos(a1)$2\*sin(a2)$2\*sin(a3)+l2\*cos(a2)$2\*sin(a1)$2\*sin(a3))

-(fx\*(l2\*cos(a1)\*cos(a2)+l3\*cos(a1)\*cos(a2)\*cos(a3)-l3\*cos(a1)\*sin(a2)\*sin(a3)))/(l2\*l3\*cos(a1)$2\*cos(a2)$2\*sin(a3)+l2\*l3\*cos(a1)$2\*sin(a2)$2\*sin(a3)+l2\*l3\*cos(a2)$2\*sin(a1)$2\*sin(a3)+l2\*l3\*sin(a1)$2\*sin(a2)$2\*sin(a3))-(fy\*(l2\*cos(a2)\*sin(a1)+l3\*cos(a2)\*cos(a3)\*sin(a1)-l3\*sin(a1)\*sin(a2)\*sin(a3)))/(l2\*l3\*cos(a1)$2\*cos(a2)$2\*sin(a3)+l2\*l3\*cos(a1)$2\*sin(a2)$2\*sin(a3)+l2\*l3\*cos(a2)$2\*sin(a1)$2\*sin(a3)+l2\*l3\*sin(a1)$2\*sin(a2)$2\*sin(a3))-(fz\*(l2\*sin(a2)+l3\*cos(a2)\*sin(a3)+l3\*cos(a3)\*sin(a2)))/(l2\*l3\*cos(a2)$2\*sin(a3)+l2\*l3\*sin(a2)$2\*sin(a3))