```
#vloz "zakladni.dk"

// Pokoj v perspektivì
//
// zobrazení v perspektivì
// pomocí konstrukcí (funkce pers)

pers(Op, B) {
// zobrazeni v perspektive
// Op - pocatek vysledneho obrazu
// B - bod
// musi existovat Ro, H, S

    s = primka(B, S);
    R = p(Ro, s);
    kdyz(H."x" < R."x") x = v(R.1, H.1);
    jinak x = -v(R.1, H.1);
    y = R."z";
    V = bod(Op."x"+x*mp, Op."y"-y*mp);
    videt(V, 2, 0);
    videt(V, 1, 1, 0.1, 2);
    barva(V, "zelena");
    popis(V, vse, 0);
    vrat V;
}

zcu (cu) {
// zobraz ctyruhelnik
    cup = pers(Op, cu:0);
    cup = pers(Op, cu:1);
    cup = pers(Op, cu:2);
    cup = pers(Op, cu:3);
    cup_ = nuhelnik(cup);
    videt(cup_, 1, 2); //, ?, ?, 1, 0
    barva(cup_, "zelena");
    vrat cup_;
}

ob (A, d, s, v) {
// obdelnik
    o = bod((A."x")*m,        (A."y")*m, (A."z")*m);
    kdyz (s==0) {
        //zadni
        o = bod((A."x"+d)*m, (A."y")*m, (A."z")*m);
        o = bod((A."x"+d)*m, (A."y")*m, (A."z"+v)*m);
        o = bod((A."x")*m,        (A."y")*m, (A."z"+v)*m);
    }
    kdyz (d==0) {
        //bocni
        o = bod((A."x")*m, (A."y"+s)*m, (A."z")*m);
        o = bod((A."x")*m, (A."y"+s)*m, (A."z"+v)*m);
        o = bod((A."x")*m, (A."y")*m,        (A."z"+v)*m);
    }
    kdyz (v==0) {
        //zemni
        o = bod((A."x"+d)*m, (A."y")*m,        (A."z")*m);
        o = bod((A."x"+d)*m, (A."y"+s)*m, (A."z")*m);
        o = bod((A."x")*m,        (A."y"+s)*m, (A."z")*m);
    }
    popis(o, vse, 0);
    vrat o;
```

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}

hlavni () {
    papir(29.7, 21, 1);
    okraj(0.5, 0.5, 0.5, 0.5, 0.3, 1, 0);
    Op = bod(0, -6.5);

    posunutipss(1, 3);

    // meritko
    m = 2;
    mp = 2;

    // horizont a stred
    H = bod(-1*m, 3*m, 1.7*m);
    h = primka(H, bod(4*m, 0*m, 1.7*m));
    Ha = rovnobezna(Pi, H);
    k = kolmice(Ha, h, H);
    Ro = kolma(k, H);
    S = bod(k, 0.5*m, ?, ?);
    zrus(k);
    zrus(Ha);

    // koberec
    kob = ob(bod(-4.5,1,0), 4, 2, 0);
    kob_ = nuhelnik(kob);

    // podlaha
    pod = ob(bod(0,0,0), -5, 3.5, 0);
    pod_ = nuhelnik(pod);

    // zadni stena
    zs = ob(bod(-5,0,0), 5, 0, 3);
    zs_ = nuhelnik(zs);

    // televize
    tv1 = ob(bod(-4.75,0.5,1), 1.5, 0, 1);
    tv1_ = nuhelnik(tv1);
    tv2 = ob(bod(-4.75+1.5,0.5,1), 0, -0.4, 1);
    tv2_ = nuhelnik(tv2);
    tv3 = ob(bod(-4.75,0.5,2), 1.5, -0.4, 0);
    tv3_ = nuhelnik(tv3);

    // obraz
    obr = ob(bod(-3,0,1.25), 0.75, 0, 0.75);
    obr_ = nuhelnik(obr);

    // skrin
    skr1 = ob(bod(-2,0.6,0), 1, 0, 3);
    skr1_ = nuhelnik(skr1);
    skr2 = ob(bod(-1,0.6,0), 1, 0, 3);
    skr2_ = nuhelnik(skr2);
    skr3 = ob(bod(0,0.6,0), 0, -0.6, 3);
    skr3_ = nuhelnik(skr3);

    // police
    pol = ob(bod(-5,0.5,2.25), 3, -0.5, 0);
    pol_ = nuhelnik(pol);

    //skrinky
    ska1 = ob(bod(-5,0.5,0), 1, 0, 1);
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```
        ska1_ = nuhelnik(ska1);
        ska2 = ob(bod(-4,0.5,0), 0, -0.5, 1);
        ska2_ = nuhelnik(ska2);
        skc1 = ob(bod(-3,0.5,0), 1, 0, 1);
        skc1_ = nuhelnik(skc1);
        sk = ob(bod(-5,0.5,1), 3, -0.5, 0);
        sk_ = nuhelnik(sk);

        // bocni stena
        bs = ob(bod(-5,0,0), 0, 3.5, 3);
        bs_ = nuhelnik(bs);

        // dvere
        dve = ob(bod(-5,2.25,0), 0, 1, 2);
        dve_ = nuhelnik(dve);
        do1 = ob(bod(-5,2.25,1.5), 0, 1, 1);
        do1_ = nuhelnik(do1);

        kk=0.41421;
        do2 = do1:1 + bod(0,-1,-kk);
        do2 = do1:1 + bod(0, kk,1);
        do2 = do1:2 + bod(0,-1, kk);
        do2 = do1:0 + bod(0,-kk,1);
        popis(do2, vse, 0);

        // zrcadlo
        zrc = ob(bod(-5,2,1), 0, -0.75, 1);
        zrc_ = nuhelnik(zrc);

        kobp_ = zcu(kob);
        zsp_ = zcu(zs);
        bsp_ = zcu(bs);
        tv1p_ = zcu(tv1);
        tv2p_ = zcu(tv2);
        tv3p_ = zcu(tv3);
        obrp = zcu(obr);
        skr1p = zcu(skr1);
        skr2p = zcu(skr2);
        skr3p = zcu(skr3);
        polp = zcu(pol);
        ska1p = zcu(ska1);
        ska2p = zcu(ska2);
        skc1p = zcu(skc1);
        skp = zcu(sk);
        dvep = zcu(dve);
        do1p = zcu(do1);
        do2p = zcu(do2);
        podp = zcu(pod);
        zrcp = zcu(zrc);
}
```