```
float g[bec][3][w];

<инициализация g>;

for (wi = 0; wi < w; ++wi) r[wi] = 1;

for (wi = 0; wi < w; ++wi)
{
    lo = 0.0;
    hi = 1.0;

    for (i = 0; i < bec; ++i)
    {
        upgrade(g[i][0][wi] == 0.0,
                g[i][1][wi], g[i][2][wi], &lo, &hi);
        if (lo > hi) break;
    }

    for (i = 0; i < bec; ++i)
    {
        gi0 = g[i][0][wi];
        agi0 = fabs(gi0);

        for (j = i + 1; j < bec; ++j)
        {
            gj0 = g[j][0][wi];
            agj0 = fabs(gj0);

            upgrade(gi0 * gj0 < 0.0,
                    agi0 * g[j][1][wi] + agj0 * g[i][1][wi],
                    agi0 * g[j][2][wi] + agj0 * g[i][2][wi],
                    &lo, &hi);
            if (lo > hi) break;
        }

        if (lo > hi) break;
    }

    if (lo > hi) r[wi] = 0;
}
```

```
__m512 g[bec][3];

<инициализация b>;

_mm512_store_epi32(r, _mm512_set1_epi32(1));


__m512 lo = z0;
__m512 hi = z1;

for (i = 0; i < bec; i++)
{
    upgrade(_mm512_cmpeq_ps_mask(g[i][0], z0),
            g[i][1], g[i][2], &lo, &hi);
    if (!_mm512_cmplt_ps_mask(lo, hi)) break;
}

for (i = 0; i < bec; i++)
{
    gi0 = g[i][0];
    agi0 = ABS(gi0);

    for (j = i + 1; j < bec; j++)
    {
        gj0 = g[j][0];
        agj0 = ABS(gj0);

        upgrade(_mm512_cmplt_ps_mask(MUL(gi0, gj0), z0),
                FMADD(agi0, g[j][1], MUL(agj0, g[i][1])),
                FMADD(agi0, g[j][2], MUL(agj0, g[i][2])),
                &lo, &hi);
        if (!_mm512_cmplt_ps_mask(lo, hi)) break;
    }

    if (!_mm512_cmplt_ps_mask(lo, hi)) break;
}

_mm512_mask_store_epi32(r,
                        _mm512_cmplt_ps_mask(hi, lo),
                        _mm512_set1_epi32(0));
```