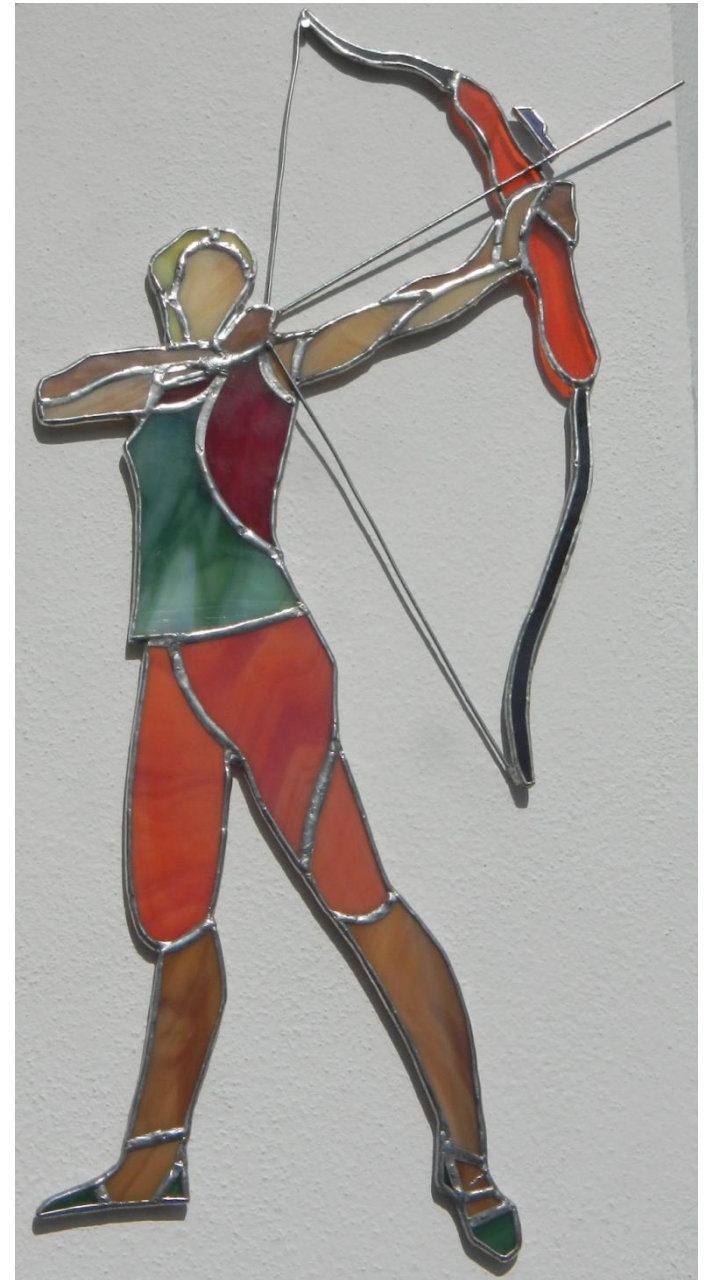
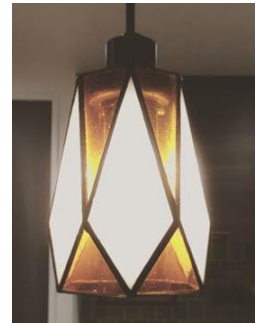
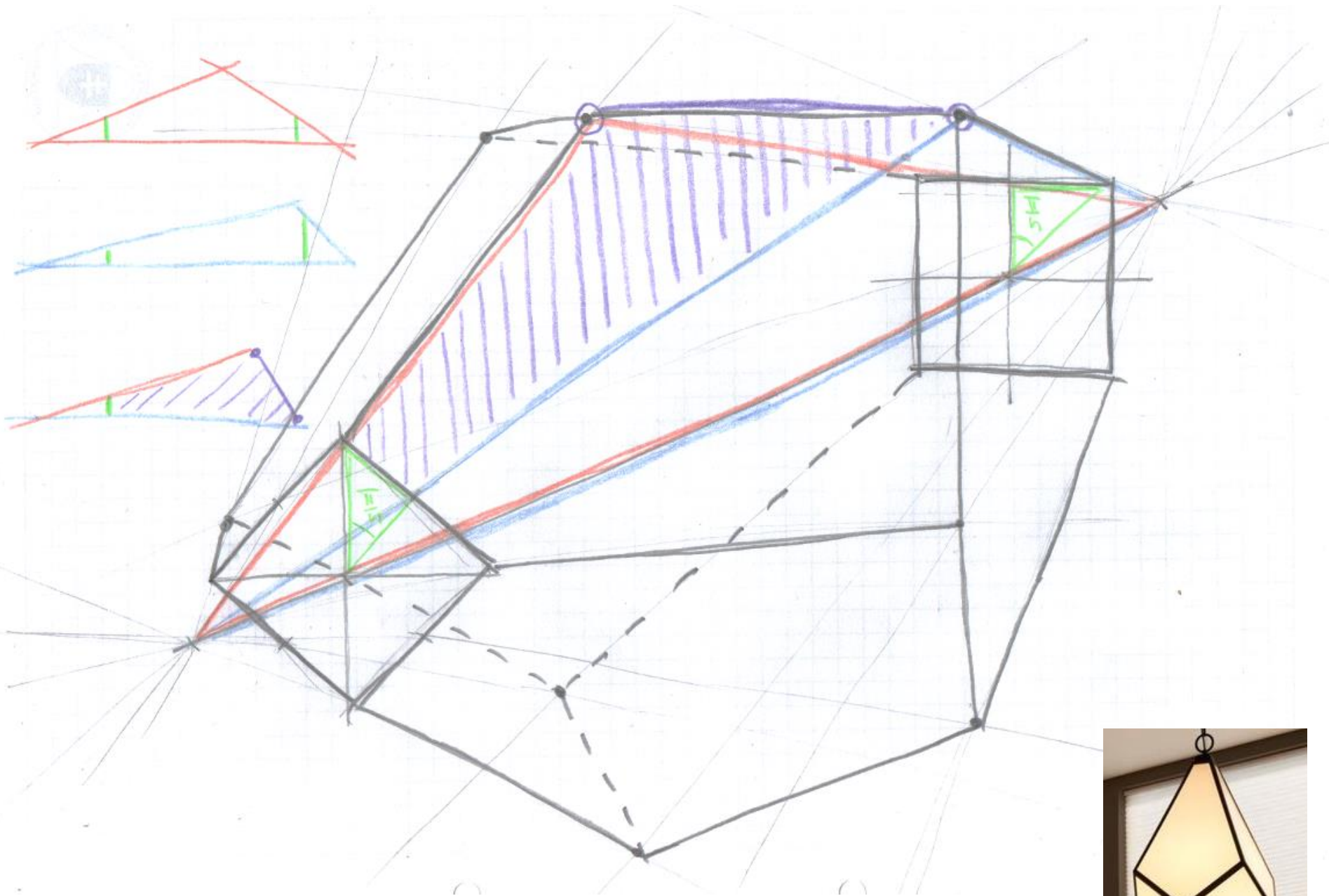
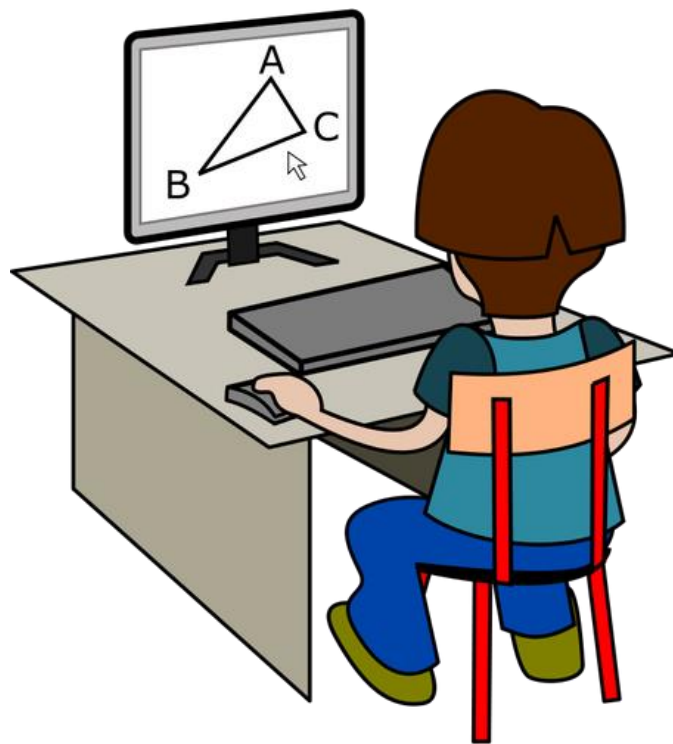


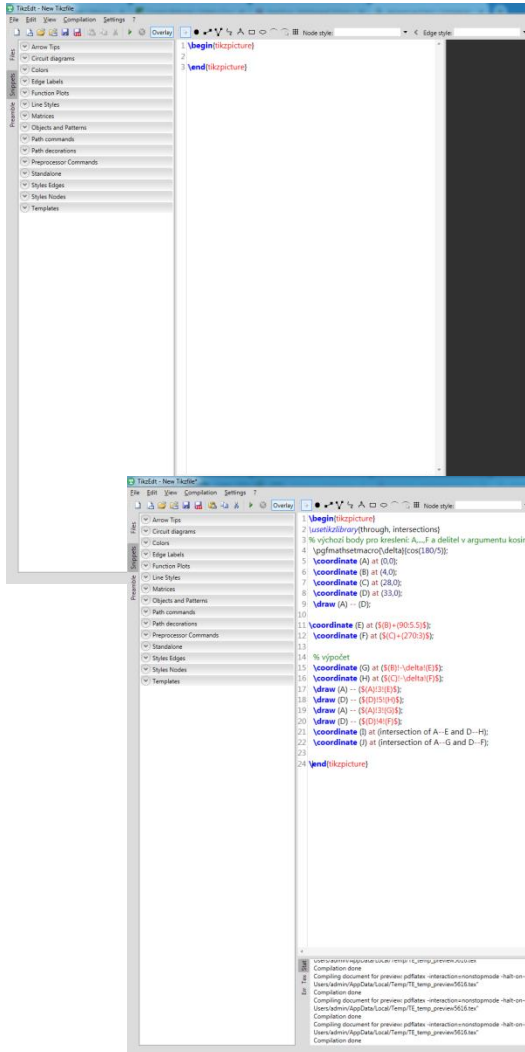
K čemu je geometrie dobrá
aneb jak jsem vyráběl lustr











```

1 \tikzset{
2   c/.style={every coordinate/.try}
3 }
4
5 \begin{tikzpicture}
6   \usetikzlibrary{through, intersections}
7   % výchozí body pro kreslení: A,...,F a delitel v argumentu kosinu
8   \pgfmathsetmacro{\delta}{cos(180/5)};
9   \coordinate (A) at (0,0);
10  \coordinate (B) at (4,0);
11  \coordinate (C) at (28,0);
12  \coordinate (D) at (33,0);
13  %\draw (A) -- (D);
14  \coordinate (E) at ($(B)+(90:5.5)$);
15  \coordinate (F) at ($(C)+(270:3)$);
16
17  % výpočet
18  \coordinate (G) at ($(B)!-\delta!(E)$);
19  \coordinate (H) at ($(C)!-\delta!(F)$);
20  %\draw (A) -- ($(A)!3!(E)$);
21  %\draw (D) -- ($(D)!5!(H)$);
22  %\draw (A) -- ($(A)!3!(G)$);
23  %\draw (D) -- ($(D)!4!(F)$);
24  \coordinate (I) at (intersection of A--E and D--H);
25  \coordinate (J) at (intersection of A--G and D--F);
26  \coordinate (K) at ($(G)!5cm!270:(A)$);
27  \coordinate (L) at ($(H)!5cm!270:(D)$);
28  \node (c1) at (A) [circle through={(E)}] {};
29  \coordinate (M) at (intersection 1 of c1 and G--K);
30  \node (c2) at (D) [circle through={(F)}] {};
31  \coordinate (N) at (intersection 1 of c2 and H--L);
32  \node (c3) at (A) [circle through={(I)}] {};
33  \coordinate (O) at (intersection 1 of c3 and A--M);
34  \node (c4) at (D) [circle through={(J)}] {};
35  \coordinate (P) at (intersection 1 of c4 and D--N);
36  \coordinate (Q) at ($(G)!-1!(M)$);
37  \coordinate (R) at ($(H)!-1!(N)$);
38  \coordinate (S) at ($(G)!:(O)!:(J)$);
39  \coordinate (T) at ($(H)!:(P)!:(I)$);
40  \coordinate (U) at ($(S)!-1!(O)$);
41  \coordinate (V) at ($(T)!-1!(P)$);
42  \draw [thick] (Q) -- (M) -- (O) -- (J) -- (U) -- (R);
43  % \draw [thick] (R) -- (N) -- (P) -- (I) -- (V) -- (R);
44  \begin{scope}[every coordinate/.style={shift={(-18,-26)}}]
45    \draw [thick] ([c]R) -- ([c]N) -- ([c]P) -- ([c]I) -- ([c]V) -- ([c]R);
46  \end{scope}
47 \end{tikzpicture}

```

