Using software packages GAP and MAGMA we have constructed, up to isomorphism and complementation, all nontrivial primitive t-designs with $PSL_2(q)$ as an automorphism group, $5 \leq q \leq 103$. These designs have $v = q + 1$ points of the projective line as the point set.
The results are available at the site:

$$http://www.pmfst.hr/\tilde{}sbraic/t-designs.$$

There you will find the file "**table.pdf**" containing the list of all groups $PSL_2(q)$, $5 \leq q \leq 103$, together with the number of designs obtained for each group. If this number is not equal to zero, then a click on "$PSL_2(q)$" links you to the documentation on associated designs. The documentation is in the form of a table with designs' labels, parameters, full automorphism group and Aschbacher's class of a base block stabiliser. The table also contains an active link "$PSL_2(q)$", a connection to the directory/file with a permutation representation of the underlying group and the list of base blocks, one for each obtained design.

Let $\underline{nbr} = 5, 9, 13, 16, 17, 19, 25, 27, 29, 31, 37, 41, 43, 47, 49, 53, 59, 61, 64, 67, 71, 73, 79, 81, 83, 89, 97, 101, 103$.

MAGMA USERS:

The document entitled $L2q\underline{nbr}$ (in the directory of the same title) contains the following two elements:

1. $L\underline{nbr} \rightarrow$ a permutation representation of the group $PSL_2(\underline{nbr})$;
2. $B \rightarrow$ the list of all base blocks of the designs with $PSL_2(\underline{nbr})$ as an automorphism group.

The other blocks of these designs can be obtained by the action of $PSL_2(\underline{nbr})$ on base blocks.
The document $L2q\underline{nbr}$ is loaded within MAGMA by calling the following statement.

```
load"L2/L2qnbr";
```

By the command

```
L2qnbr:=[Design<2,GSet(Lnbr)|Orbit(Lnbr,x)>:x in B];
```

you reconstruct associated designs from the base blocks.

GAP USERS:
In $L2GAP$ folder there are 29 files named $L2q\underline{nbr}$. Each of them contains the following two elements:

1. $gen \rightarrow$ the set of generators' permutation representation of the group $PSL_2(\underline{nbr})$.

2. $B \rightarrow$ the list of all base blocks of the designs with $PSL_2(\underline{nbr})$ as an automorphism group.

The other blocks of these designs can be obtained by the action of $PSL_2(\underline{nbr})$ on base blocks.

The package "DESIGN" is loaded within GAP by calling the following statement.

```
LoadPackage("design");
```

A file $L2q\underline{nbr}$ is read into the GAP using

```
Read("L2GAP/L2qnbr");
```

By the commands

```
gg:=Group(gen);v:=NrMovedPoints(gg);
ii:=1;D:=BlockDesign(v,[B[ii]],gg);;
```

you reconstruct associated design from its base block.