Repweek 9

Blocking

Define Block generators:

8 Blocks: $B_1 = ACE$ $B_2 = ABEF$ and $B_3 = ABCD$.

$$B_1B_2 = ACEABEF = BCF$$
$$B_1B_3 = ACEABCD = BDE$$
$$B_2B_3 = ABEFABCD = CDEF$$
$$B_1B_2B_3 = ACEABEFABCD = ADF$$

Fractional factorials

Find defining relation from generators.

2^{5-2}: D=AB, E=AC

I=ABD and I=ACE and I^2 =I=ABDACE=BCDE.

Hence the defining relation is I=ABD=ACE=BCDE.

2^{7-4}: D=AB, E=AC, F=BC and G=ABC

$$I = ABD=ACE=BCF=ABCG$$

I^2 =I=BCDE=ACDF=CDG=ABEF=BEG=AFG

I^3 =I=DEF=ADEG=BDFG=CEFG

I^4 =I=ABCDEFG