Solution

Solution 2a

- {A, B, C, D} does not identify all attributes.
- {A, C, D, E, G} is a superkey but not a key, since attribute G can be removed and the resulting set of attributes is a key.

Solution 2b

```
Decompose on BC -> D
{BC}+ = {BCDG}

            R1(B,C,D,G)
            R2(B,C,A,E,F)
                B,C -> R1.(B,C)

Decompose R2 on FA -> B
{FA}+ = {FAB}
            R21(F,A,B)
            R22(F,A,C,E)
                F,A -> R21.(F,A)

Key of R22 is FACE
```

Solution 2c

```
BC -> G
```

Left side is not a superkey of R, and G is not prime in R.

Solution 2d

```
R1(B, C, D, G)
R2(D, E, F)
R3(F, A, B)
R4(F, A, C, E)
```