

The Chempro chemical company manufactures a special product made up of seven chemicals. Since the company wants to keep the manufacturing formula secret, it does not identify the chemicals by name – just by number. These chemicals are stored at the company’s main factory. The seven chemicals could be stored in seven separate buildings but it would be very expensive for the company to build so many storage areas. The chemicals *CANNOT* be stored in one building since many of them (if combined in the wrong way) might make toxic fumes harmful to humans. The company’s chief chemical engineer has provided the following table of information:

| Chemical # | Cannot be stored with chemical #'s |
|------------|------------------------------------|
| 1          | 2,5,7                              |
| 2          | 1,3,5                              |
| 3          | 2,4                                |
| 4          | 3,7                                |
| 5          | 1,2,6,7                            |
| 6          | 5                                  |
| 7          | 1,4,5                              |

Help Chempro save some money. What is the least number of storage buildings that are needed to safely store all seven chemicals?