

Here are some homework problems, based upon the filmstrips we watched.

**Problem 1.** *Paul, John and George are three rock stars. One plays a guitar, one plays the drums, and one plays the piano, but not necessarily, respectively. The drummer tried to hire the guitarist for a recording session, but was told that the guitarist was out of town doing shows with the pianist.*

1. *The pianist earns more money than the drummer.*
2. *George earns less than John.*
3. *George has never heard of John.*

*What instrument does each of the rock stars play?*

**Problem 2.** *Four college girls who share an apartment are listening to an album of music while one of them does her nails, one does her hair, one puts on make-up, and one is reading.*

1. *Myra isn't doing her nails and she isn't reading.*
2. *Maud is not putting on make-up and she is not doing her nails.*
3. *If Myra is not putting on make-up, Mona is not doing her nails.*
4. *Mary is not reading and she is not doing her nails.*
5. *Mona is not reading and she is not putting on make-up.*

*What is each girl doing?*

**Problem 3.** *Can you drop a paper match from a height of about 1 meter so that it falls on its edge and remains on its edge?*

**Problem 4.** *dike in Holland is missing a single brick. Water is pouring through the rectangular hole which is centimeters by 20 centimeters. The man who discovered the hole has with him a saw and a cylindrical wooden pole with a diameter of 50 millimeters. What is the best way he can cut the pole so as to plug up the hole?*

**Problem 5.** *A wine bottle has a cylindrical shape for its lower section. The section is  $\frac{3}{4}$  of the bottle's height. The upper fourth of the bottle is irregularly shaped. The bottle is filled half-way up. Without opening the bottle, and with the aid of only a ruler, how can you determine exactly what percentage of the bottle's total volume is filled?*