1. To fill a pool one can use two different pipes: A and B. If one uses only the pipe A the pool can be filled in 10 hours, using smaller pipe B one fills the pool in 30 hours. How much time does it take to fill the pool using both pipes.

2. It is easy to arrange 16 checkers in 10 rows of 4 checkers each, but it is harder to arrange 9 checkers in 6 rows of three checkers each. Do both.

3. An indian village consists of 9 tepees in corners of 3×3 grid. A cowboy has to ride through all the tepees making only three turns. Can he do it?

4. Cut a disk with 6 straight lines into the greatest possible number of parts.

5. Form 6 squares with 9 matches (you can cross one match over another).