

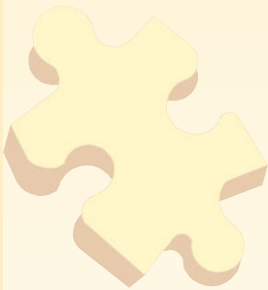


Put your thinking caps on! This month's challenges require you to follow the footsteps of a GLO surveyor, and to determine the time of day using logic, geometry, and trigonometry.

### Problem 51

If the original government surveyor followed procedures and walked only along section lines, how far would he walk if he set all of the interior corners of the township? (Assume all of the exterior corners are set and all section lines are exactly one mile.)

|    |    |    |    |    |    |
|----|----|----|----|----|----|
| 6  | 5  | 4  | 3  | 2  | 1  |
| 7  | 8  | 9  | 10 | 11 | 12 |
| 18 | 17 | 16 | 15 | 14 | 13 |
| 19 | 20 | 21 | 22 | 23 | 24 |
| 30 | 29 | 28 | 27 | 26 | 25 |
| 31 | 32 | 33 | 34 | 35 | 36 |



### Problem 52

A surveyor goes in to the courthouse and notices that the morning sun from the 10' high floor-to-ceiling window defines the diagonal of one wall and passes through the center of the clock on the wall, which has both hands pointing all the shadow to the upper corner. What time does she notice this? How long is the wall on which the clock is mounted?

