

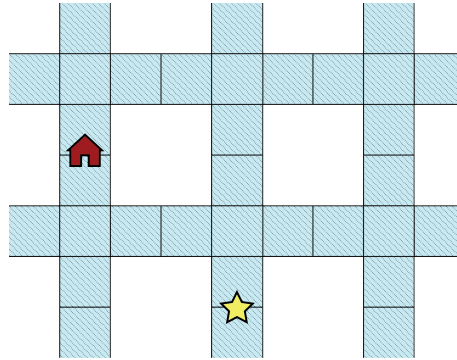


Problem of the Week

Problem C

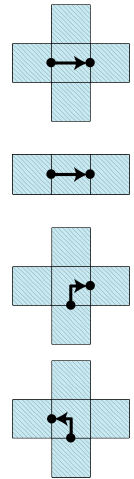
Crossing Canals

Koji is rowing his boat on a busy canal system near his home. The following diagram shows the canal system with a star representing Koji's current location and the house representing the location of his home.



From Koji's extensive canal experience, he knows the following:

1. Rowing straight across an intersection square takes 30 seconds.
2. Rowing straight across a square that is not an intersection takes 20 seconds.
3. Turning right at an intersection takes 15 seconds.
4. Turning left at an intersection takes 270 seconds, due to heavy traffic.
5. It is not possible make U-turns or reverse direction.



Calculate the shortest amount of time it will take Koji to row home from his current position, using only the canals shown.

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This problem was inspired by a past [Beaver Computing Challenge \(BCC\)](#) problem.