Extra puzzles and riddles for 19 May

A I have ten objects with a total weight of 75 kg that I want to pack into 3 crates. Each crate can carry a maximum of 25 kg. How can I pack these objects into the three crates?

There is more than one way of doing this – see how many you can find.

B This is a very old puzzle which many of you will have come across before.

For some reason which is never explained a farmer has to transport a fox, a chicken and a bag of corn safely across a river in a boat. The farmer may only take one thing at a time in the boat.

She cannot leave the fox and the chicken together on either side of the river, or the fox will eat the chicken. Likewise, she cannot leave the chicken alone with the bag of corn or the chicken will eat the corn. How can the farmer get everything across the river without anything being eaten?

C One morning at 8.00 am a hiker starts to climb a mountain on a narrow path that zig-zags all the way from the bottom up to the top. Of course, he walks with varying speed, taking breaks to rest and to eat his lunch. He reaches the top of the hill at 6.40 pm and then spends the night on top in a tent.

Next morning he sets off again at 8.00 am to walk back down along the same path. He goes down at variable speed, but overall a lot quicker than he came up, and he reaches the bottom at 4.15 pm.

Is it possible that there could be a point on the path that the walker reached at exactly the time on both days?

D It’s time for a bit of alchemy. Can you change lead into gold by altering one letter at a time, at each step producing a proper word?

E During prohibition in Chicago a thirsty man was anxious to obtain access to a speakeasy that had a guard on the door, and used a coded admission system. He hid behind some bins opposite the entrance and listened to customers trying to get in.

The first prospective customer arrived and the guard said to him "twelve," to which the customer replied with "six." He was admitted.

A second person approached the guard who said "six," to which he replied "three," and was also let in.

Thinking that he had cracked the code, the thirsty lurker went up to the guard, who said "ten, " to which the man confidently replied "five." The guard immediately slammed the door in his face.

Can you crack the code? What should the man have said?