

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. There are 10 possible ways – see the diagram at the right.

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?

One possible solution is as follows.

The farmer first takes the chicken across the river and leaves it on the other side. She then comes back and picks up the fox and takes it to the other side. When she gets there, she drops off the fox and brings the chicken back with her. She then drops the chicken off and picks up the bag of corn which she takes across the river. Finally, she goes back and picks up the chicken and takes it across the river one last time. When this is done, she has safely transported everything across the river and is able to go on her way.

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.

{Crate 1}, {Crate 2}, {Crate 3}
{15,10}, {13,8,4}, {11,9,2,2,1}
{15,10}, {13,11,1}, {9,8,4,2,2}
{15,10}, {11,8,4,2}, {13,9,2,1}
{15,10}, {11,9,4,1}, {13,8,2,2}
{11,10,4}, {15,8,2}, {13,9,2,1}
{11,10,4}, {15,9,1}, {13,8,2,2}
{13,8,4}, {15,9,1}, {11,10,2,2}
{13,10,2}, {15,8,2}, {11,9,4,1}
{13,10,2}, {15,9,1}, {11,8,4,2}
{13,11,1}, {15,8,2}, {10,9,4,2}

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

Yes, it absolutely certain! Imagine that another walker set off from the top at the same time that he set off from the bottom. They are bound to meet somewhere on the path: so both would be at the same point at the same time.

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?

lead - load - goad - gold.

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?

He should have said "three." The code is simply to reply with the number of letters in the number that the guard said.