

Truth Tables

Exercises

Dr. Mark Lee
mgl@cs.bham.ac.uk

1. A simple argument

If Alan goes to work early then his wife Beatrix doesn't prepare breakfast. Alan didn't go to work. Therefore Beatrix made breakfast.

2. Advertising

A radio commercial states "If you're thinking of orange juice but you're not thinking of Orange Blossom, then you're just not thinking of orange juice". Is this a valid claim?

3 A familiar argument

If Thomas is not a goldsmith then John is not a merchant. Therefore Thomas is in fact a goldsmith because John is certainly a merchant.

4. Creepy Crawlies

If archnids have eight legs then crabs spin webs and scorpions live under water. Crabs do not spin webs. Therefore arachnids do not have eight legs.

5. Football

(this is only for the truly committed - about logic that is. Not football.)

If Liverpool win the F.A. Cup then either Manchester or Arsenal are in the Semi-Finals. If Manchester are in the Semi Finals, Liverpool do not win the Cup and if Derby are in the Semi Finals then Arsenal. are not. So it can be concluded that if Liverpool win the F.A. Cup, Derby are not in the Semi Finals.