

Answers to Quiz 1

Q. 1. White – it has to be a polar bear.

There is only one place on earth where you can walk 2 miles south, then 2 miles east and then 2 miles north and be back at your start point. That is the North Pole. Glad they took their thermals!!

Q. 2 Better than evens.

For the nerds... if there are 23 people in a room, the chance that person 2 has a different birthday to person 1 is 364/365. The chance that person 3 has a different birthday to persons 1 and 2 is $(363/365 \times 364/365)/2$ (because it does not matter in which order you pick the people). The chance that person 4 has a different birthday to the first 3 is $(362/365 \times 363/365 \times 364/365)$. When we get up to 23 people the chances of all of them having different birthdays can be written in factorial form

$$365! / [(365-23)! \times 365^{23}]$$

This calculates to 0.492. So the chances that two people **do** have the same birthday is 1.0 – 0.492 or 50.7% (better than evens!). Amazingly if there are 75 people in a room, the chance that two people will share a birthday is 99.9% ([Ref.](#))

Q 3. On Blakelow Hill, which has an elevation of 367 m.

The next highest is Masson Hill which is 335 m. High Tor, although impressive, is a meagre 205 m. ([Source](#))

Q.4.

Richard Arkwright (Jr) (1755 – 1843) (His father, Sir Richard Arkwright, had died before he could move into Willersley Castle)

Francis S. Darwin (1786 – 1859) (2nd son of Erasmus Darwin and a half uncle of Charles Darwin)

John Smedley (Jr) (12/6/1803 – 1874) (One of 4 generations with this name and son of the founder of Lea Mills. This John Smedley was the most famous one who also built the Hydro)

Joseph Whitworth (21/12/1803 – 1887) (He is buried in Darley Dale. A number of buildings in this area (Institute & Hospital) and Manchester bear the Whitworth name)

Florence Nightingale (1820 – 1910) (She was related to Peter Nightingale, a co-founder with John Smedley (Sr) of Lea Mills. She once lived at Lea Hurst)

(Source – Wikipedia)