MindBenders 4

1. If there are 5 Mondays, 5 Tuesdays and 5 Wednesdays in January, on what day of the week will February 1st fall?

2. In a small group of people it was found that all of the following relationships could be claimed - Father, mother, son, daughter, brother, sister, cousin, nephew, niece, uncle and aunt.
What is the smallest group of people that can manage this, and how must they be related?

3. When cleaning up at the end of a picnic, three children found 21 drink-cans.
7 were full, 7 were half-full and 7 were empty.
The children agreed to share them out so that each of them should have the same number of cans and the same amount of drink.
How did they manage it?

4. Time yourself and see just long it takes you to work out -
1 x 2 x 3 x 4 x 5 x 6 x 7 x 8 x 9 x 0

5. Find a number whose double is bigger than its half by 99.

6. A clock takes 5 seconds to strike six times. How long does it take to strike twelve times?
Another clock takes 5 seconds to strike five times. How long does that clock take to strike ten times?

7. There are some sheep and geese in a field, and between them they possess 50 legs. If the sheep had had 2 legs each, and the geese had had 4 legs each there would have been 58 legs present. How many sheep and geese are there?

8. A number is halved and the result is squared. This gives an answer which is twice the size of the original number. What was the original number?

9. If the digits of a certain 2-digit number are changed around, the result is a number which is one less than half of the original 2-digit number. What was the original number?

10. In one school-playground, 2 lollipops are reckoned to be worth 3 conkers and a chewing-gum. 3 lollipops plus 2 chewing-gums and a conker are thought to be a fair swop for 25 marbles.
How many marbles would you have to give in exchange for either a lollipop or a chewing-gum by itself?

11. In one chess league, where each competitor played each of the other competitors once, and once only, a total of 300 games were played.
How many competitors were there and how many games did each one play?

12. Find two numbers which, when multiplied together make a million. Neither of the two numbers must use any 0's.

13. A man and his wife each weigh 50kg. They have two children each weighing 25kg. The whole family wish to cross a river in a rowing-boat which can only carry a maximum of 50kg. Every member of the family can row. How can they manage it?

14. In what year (in the 20th century) would a person have been able to say, "My age this year is the square root of the year in which I was born"?

15. In this multiplication sum: ? ? x ? = ? ? ? all of the digits have been replaced by a ?. The missing digits are 1, 2, 3, 4, 5, 6. Each is used once and once only. Can you work out the only correct version of the sum?

16. Kim is twice as old as Sharon was when Kim was as old as Sharon is now. Kim is 24. How old is Sharon?

17. A plain pencil and a coloured pencil together cost 20p. The coloured pencil costs 10p more than the plain pencil. How much does each cost?

18. What is a third and a half of one third of three and a half?

19. A man has a 10-pint measure and 7-pint measure. Neither of the measures has any markings on the side, so cannot be used directly for any in-between measurements.
He has an unlimited supply of water which he can dip into as he likes and, of course, he can always pour water away.
Using just those two measures, how can he get exactly 9 pints of water in the 10-pint measure?

20. Find three whole numbers which, when multiplied together, give the same result as when added together.

MindBenders 4 – Solution

1. Thursday

2. Four people.
A brother and a sister.
The brother has a son.
The sister has a daughter.

3. 3F + 1H + 3E
3F +1H + 3E
1F + 5H + 1E

4. Just the time to read it?

5. 66

6. 11 seconds
11.25 seconds

7. 7 sheep
11 geese

8. 8