

Weekly Quiz

Questions:

Week 5 – Solutions to the maths office by Thursday 7th October

1. Which numbers between 20 and 30 (inclusive) are not a multiple of 5 or not a multiple of 7 or not the sum of a multiple of 5 and a multiple of 7?
2. Good news! Accidents in British homes involving tea-cosies went down from three to zero in the last 10 years. What percentage decrease was that?
3. Each evening the Pythagoras family sit down for supper at their (four legged) kitchen table. Mr. and Mrs. Pythagoras sit on ordinary (four legged) chairs and both their children sit on (three legged) stools. How many legs (human and other) are there?
4. There used to be 5 parrots in my cage. Their average value was £600. One day while I was cleaning out the cage the most beautiful parrot flew away. The average of the remaining four parrots was £500. What was the value of the parrot that escaped?
5. I shall be 11 shortly – on October 17th. My bother was 9 recently - on August 24th. By how many days am I older than my brother?
6. Two cars start in the same spot. Car A travels due West for 6 miles. Car B travels due East for 6 miles. Both cars then turn 90° to their left and travel for a further 8 miles. How far apart are they now?

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Solutions:

Week 5 – 07/10/04

1. 20 divisible by 5, 21 divisible by 7, $22 = 15 + 7$, $24 = 10 + 14$, 25 divisible by 5, $26 = 21 + 5$, $27 = 20 + 7$, 28 divisible by 7. $29 = 15 + 14$, 30 divisible by 5. Therefore only 23 left.
2. Percentage decrease from 3 to zero is 100% decrease.
3. table = 4 legs, chairs = $8 + 6$ legs, humans = 8 legs therefore total of 26 legs
4. 5 parrots average £600 therefore total cost is £3000
4 parrots average £500 therefore total cost is £2000 therefore parrot that flew away was worth £1000.
5. 11 on Oct 17th, 9 on Aug 24th therefore 55 days between Birthdays. In total $(365 - 55) + 365 = 675$ days older.
6. Using Pythagoras' theorem we can see that they end up 20 miles apart.

