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| **Mini murder mystery****Multiples, factors, primes, powers, roots** |
| One of these 6 people has murdered one of the others. Each has made 4 statements about the following list of numbers. **The murderer has made 3 errors. The victim has made 0 errors.****The other suspects have made 1 or 2 errors.** |
| **5, 8, 13, 16, 21, 38, 49,** **52, 61, 64, 72** |
| http://2.bp.blogspot.com/_vUxTZOpOrrk/TIlM5ZHVb_I/AAAAAAAAA4g/0UZwnr0xMm0/s200/girl_clipart.jpgChloe says* There are 5 odd numbers
* There are 2 square numbers
* There are 2 multiples of 7
* The lowest prime number in the list is 13
 | http://www.greatsayings.net/wp-content/uploads/2008/10/kid_clipart_boy.gifPhil said* There are 3 primes
* The difference between the 1st 2 odd numbers in the list is 8
* There are 6 even numbers
* There are 3 factors of 64 in the list
 |
| Pauline says* http://l.thumbs.canstockphoto.com/canstock4471788.jpgThere are 2 cubes in the list
* There are 2 multiples of 9 in the list
* The largest gap between numbers is 9.
* The answer to 25 is in the list
 | Carl says* The answer to √121 is in the list
* There are 2 multiples of 13 in the list
* Royalty-Free (RF) Clipart Illustration of a Black Athlete Jumping On A Basketball Hoop To Make His ShotThere are 4 square numbers
* There are 4 multiples of 8
 |
| Miss Lune says* 24 is in the list
* √169 is in the list
* There are no factors of 18 in the list
* http://mrssandy.pbworks.com/f/1246977530/teacher_clipart_1.gifThe product of the 2 lowest odd numbers is 63
 | Geoff says* There are 2 cubes in the list
* 26 is in the list
* http://www.hasslefreeclipart.com/clipart_carttravel/pilot_100.jpg√81 is in the list
* There are no multiples of 12
 |
| **http://www.map-of-uk.co.uk/maps/map-of-west-midlands.gifWhere**The murder was committed in a Midlands town near to Birmingham**.**  |
| It was Wolverhampton if there are 3 prime numbers in the 20’s |
| It was Kidderminster if there are 4 multiples of 30 between 100 and 200 |
| It was Nuneaton if there are 9 factors of 36 |
| It was Walsall if there are 5 perfect square numbers between 50 and 150 |
|  |
| **When.** Calculate the time and date from these (eg hours answer =17 minutes part =28 gives a time of 17:28 |
| The hour part of the time is the answer to | √16 x ( 42- √121) |
| The minute part of the time is the answer to | 33 |
| The day part of the date is  | The factors of 8 added together |
| The month part of the date is | The 3rd multiple of 4 |
| The year part of the date is  | (103x √4) + √100 |

**Why**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **a** | **b** | **c** | **d** | **e** |
| 42 | √100 | 12 + 13 | 102 ÷ 4 | 32 - √4 |
| **f** | **g** | **h** | **i** | **j** |
| Next prime after 13 | 1st prime no in the 20’s | 3 + 32 | 5th prime number | 2nd prime x 4th prime |
| **k** | **l** | **m** | **n** | **o** |
| LCM of 2 & 7 | 22 | √169 | 110 | 23 |
| **p** | **q** | **r** | **s** | **t** |
| HCF of 30 & 45 | 52 - 12 | Cube root of 125 | √400 | √9 |
| **u** | **v** | **w** | **x** | **y or z** |
| √36 | √81 | 42+12+12+12 | 9th multiple of 2 | 52 - √9 |
|  |
| **12** | 7 | 25 | 8 | 7 | 20 | 1 | 3 | 14 | 1 |
|  |  |  |  |  |  |  |  |  |  |
| **8** | 19 | 12 | 8 | 19 | 3 | 8 | 20 | 24 | 6 |
|  |  |  |  |  |  |  |  |  |  |
| 16 | 5 | 7 | 16 | 1 | 6 | 13 | 10 | 7 | 5 |
|  |  |  |  |  |  |  |  |  |  |