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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 Shot](http://images.clipartof.com/small/84277-Royalty-Free-RF-Clipart-Illustration-Of-A-Black-Athlete-Jumping-On-A-Basketball-Hoop-To-Make-His-Shot.jpg)There 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**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **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 |
|  |  | |  |  | |  |  |  | |  |  |  |