

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |          |            |             |              |             |              |    |    |     |       |        |         |     |     |     |       |        |         |       |       |       |       |        |         |        |        |        |        |        |         |         |         |         |         |         |         |
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| 1        | a) 27 57<br>The numbers are increasing by 10<br>b) 159 129 119<br>The numbers are decreasing by 10<br>c) 575 775 975 1,075<br>The numbers are increasing by 100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |          |            |             |              |             |              |    |    |     |       |        |         |     |     |     |       |        |         |       |       |       |       |        |         |        |        |        |        |        |         |         |         |         |         |         |         |
| 2        | Tiny has increased to middle digit by 1 each time, but above 390 the number should be 400, not 3100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |            |             |              |             |              |    |    |     |       |        |         |     |     |     |       |        |         |       |       |       |       |        |         |        |        |        |        |        |         |         |         |         |         |         |         |
| 3        | a) Adding one counter to the thousands column increases the number by 1,000<br>569,241<br>b) 568,341<br>c) 568,240<br>d) 568,251<br>Children may have used the place value chart or realised that they can just add 1 to the digit with the relevant place value.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |          |            |             |              |             |              |    |    |     |       |        |         |     |     |     |       |        |         |       |       |       |       |        |         |        |        |        |        |        |         |         |         |         |         |         |         |
| 4        | a) 234,650<br>b) 234,750<br>The counter in the hundreds row of the Gattegno chart moves one place to the right.<br>c) 224,650<br>The counter in the ten-thousands row of the Gattegno chart moves one place to the left.<br>d) The counter is removed and the counter in the row above moves one place to the right.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |            |             |              |             |              |    |    |     |       |        |         |     |     |     |       |        |         |       |       |       |       |        |         |        |        |        |        |        |         |         |         |         |         |         |         |
| 5        | <table><tr><th>Number</th><th>10 more</th><th>100 more</th><th>1,000 more</th><th>10,000 more</th><th>100,000 more</th></tr><tr><td>25</td><td>35</td><td>125</td><td>1,025</td><td>10,025</td><td>100,025</td></tr><tr><td>250</td><td>260</td><td>350</td><td>1,250</td><td>10,250</td><td>100,250</td></tr><tr><td>2,500</td><td>2,510</td><td>2,600</td><td>3,500</td><td>12,500</td><td>102,500</td></tr><tr><td>25,000</td><td>25,010</td><td>25,100</td><td>26,000</td><td>35,000</td><td>125,000</td></tr><tr><td>250,000</td><td>250,010</td><td>250,100</td><td>251,000</td><td>260,000</td><td>350,000</td></tr></table> <p>multiple possible answers e.g.:<br/>For 25, the tens and ones column always remain as 25 except in 35<br/>The sum of the digits in the original number is 7, but the sum of the digits in every answer is 8<br/>Children may have spotted a pattern with some of the numbers as you move diagonally down to the right as they are 10 times the size e.g. 35, 350, 3,500 ...</p> | Number   | 10 more    | 100 more    | 1,000 more   | 10,000 more | 100,000 more | 25 | 35 | 125 | 1,025 | 10,025 | 100,025 | 250 | 260 | 350 | 1,250 | 10,250 | 100,250 | 2,500 | 2,510 | 2,600 | 3,500 | 12,500 | 102,500 | 25,000 | 25,010 | 25,100 | 26,000 | 35,000 | 125,000 | 250,000 | 250,010 | 250,100 | 251,000 | 260,000 | 350,000 |
| Number   | 10 more                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 100 more | 1,000 more | 10,000 more | 100,000 more |             |              |    |    |     |       |        |         |     |     |     |       |        |         |       |       |       |       |        |         |        |        |        |        |        |         |         |         |         |         |         |         |
| 25       | 35                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 125      | 1,025      | 10,025      | 100,025      |             |              |    |    |     |       |        |         |     |     |     |       |        |         |       |       |       |       |        |         |        |        |        |        |        |         |         |         |         |         |         |         |
| 250      | 260                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 350      | 1,250      | 10,250      | 100,250      |             |              |    |    |     |       |        |         |     |     |     |       |        |         |       |       |       |       |        |         |        |        |        |        |        |         |         |         |         |         |         |         |
| 2,500    | 2,510                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2,600    | 3,500      | 12,500      | 102,500      |             |              |    |    |     |       |        |         |     |     |     |       |        |         |       |       |       |       |        |         |        |        |        |        |        |         |         |         |         |         |         |         |
| 25,000   | 25,010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 25,100   | 26,000     | 35,000      | 125,000      |             |              |    |    |     |       |        |         |     |     |     |       |        |         |       |       |       |       |        |         |        |        |        |        |        |         |         |         |         |         |         |         |
| 250,000  | 250,010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 250,100  | 251,000    | 260,000     | 350,000      |             |              |    |    |     |       |        |         |     |     |     |       |        |         |       |       |       |       |        |         |        |        |        |        |        |         |         |         |         |         |         |         |

| Question | Answer                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| 6        | <p>If Brett adds both counters to the same column, he could make:<br/>413,850   233,850   215,850   214,050   213,870   213,852</p> <p>There are many more possible solutions if he adds the counters to different columns, e.g.<br/>323,850   213,951</p> <p>If Brett adds both counters to the hundreds column there will be 10 counters which can be exchanged for 1 counter in the thousands column to give 214,050</p> |