

| 7th February  |  | Corbettmaths  |  |
|---|--|---|--|
| Given   |  |   |  |
| $2x^2 + cx + 13 \equiv d(x + 4)^2 + e$  |  |   |  |
| Find c, d and e   |  |   |  |
| Using all of the 5 cards below once, how many different odd numbers greater than 40000 can be made?   |  |   |  |
| <div style="border: 1px solid black; border-radius: 10px; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 2px;">8</div> <div style="border: 1px solid black; border-radius: 10px; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 2px;">4</div> <div style="border: 1px solid black; border-radius: 10px; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 2px;">2</div> <div style="border: 1px solid black; border-radius: 10px; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 2px;">7</div> <div style="border: 1px solid black; border-radius: 10px; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 2px;">3</div> |  |   |  |
| Here is a velocity-time graph of a bicycle.   |  | Estimate the distance travelled in the first 8 seconds. |  |
|   |  | Estimate the deceleration at 12 seconds.                |  |
| The set of values for x that satisfies a quadratic inequality is $x < -3$ or $x > 6$ . Write down a possible quadratic inequality.  |  |   |  |

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