### 3rd January

<table>
<thead>
<tr>
<th>-0.5</th>
<th>25</th>
<th></th>
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</thead>
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**Prove**

\[(n + 1)^2 - (n - 1)^2 + 4\]

is always even, if \(n\) is a positive integer.

**Rationalise the denominator**

\[\frac{\sqrt{3}}{\sqrt{2}}\]

**Find the equation of the line that is perpendicular to** \(3x + y = 8\) **and passes through the point** \((1, 5)\)

**Simplify**

\[(81x^8)^{-\frac{3}{4}}\]