### 4th January

Solve the simultaneous equations

\[
\begin{align*}
x + y &= 3 \\
x^2 + y^2 &= 5
\end{align*}
\]

---

Donald saves some of his pocket money each week.

He saves 10p in week 1, 16p in week 2, 22p in week 3 and so on for 40 weeks.

Find the amount he saves in week 40.

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Calculate his total savings over the 40 weeks.

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Rationalise the denominator of

\[
\frac{\sqrt{5}}{\sqrt{3} + 2}
\]

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Prove that the angle in a semi-circle is always 90°