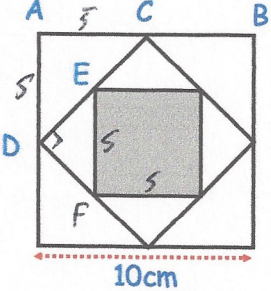


13th September	
<p>Simplify</p> $16^{-\frac{3}{2}}$ <p><math>16^{\frac{3}{2}} = 64</math></p>	<p style="text-align: right;">CorbettmOths</p> $\frac{1}{64}$
<p>The graph <math>y = x^2 + 6x - 1</math> has a line of symmetry.</p> <p>Write down the equation of the line of symmetry.</p> $y = (x+3)^2 - 9 - 1$ $y = (x+3)^2 - 10$	$x = -3$
<p>Prove</p> <p><math>(2n + 9)^2 - (2n + 5)^2</math> is always a multiple of 4</p> $4n^2 + 36n + 81 - (4n^2 + 20n + 25)$ $16n + 56$ $8(2n + 7)$	$4(4n + 14)$ <p><math>\therefore</math> multiple of 4.</p>
<p>The midpoints of the sides of a square of side 10cm are joined to form another square. This process is then repeated to create the shaded square.</p> <p>Find the area of the shaded square.</p> $CO^2 = 5^2 + 5^2$ $CO = \sqrt{50}$ $OE = \frac{1}{2} CO = \frac{\sqrt{50}}{2}$ $EF^2 = OE^2 + OF^2$ $= \left(\frac{\sqrt{50}}{2}\right)^2 + \left(\frac{\sqrt{50}}{2}\right)^2$	 <p style="text-align: center;">10cm</p> $EF^2 = \frac{50}{4} + \frac{50}{4} = \frac{100}{4} = 25$ $EF = 5$ $5 \times 5 = 25 \text{ cm}^2$