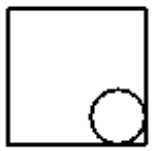
3. The diagram shows a circle with radius 1 that rolls without slipping around the inside of a square with sides of length 5.
The circle rolls once around the square, returning to its starting point.
What distance does the centre of the circle travel?



A $16 - 2\pi$ B 12 C $6 + \pi$ D $20 - 2\pi$ E 20

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3. **B** As the circle rolls, the centre of the circle moves along four straight lines shown as dashed lines. Each dashed line has length $5 - (1 + 1)$ so the total distance travelled is 4×3 which is 12.