

|           |  |  |  |               |             |  |
|-----------|--|--|--|---------------|-------------|--|
| <b>10</b> |  |  | $4x \times \frac{1}{2} \sin 2x - \int \frac{1}{2} \sin 2x \times 4 dx$ | <b>M1*</b>    | <b>3.1a</b> | allow sign errors only, condone omission of dx                                       |
|           |  |  | $2x \sin 2x - \int 2 \sin 2x dx$ <b>oe</b>                             | <b>A1</b>     | <b>1.1</b>  | allow omission of dx; may be unsimplified  |
|           |  |  | $F[x] = 2x \sin 2x + \cos 2x$  | <b>A1</b>     | <b>1.1</b>  | ignore + c   |
|           |  |  | $F\left[\frac{\pi}{4}\right] - F[0]$                                   | <b>M1dep*</b> | <b>1.1</b>  | must see substitution if F[x] incorrect, otherwise may be implied by correct answer; |
|           |  |  | $\frac{\pi}{2} - 1$ <b>or</b> $\frac{\pi-2}{2}$ <b>isw</b>             | <b>A1</b>     | <b>3.2a</b> | allow recovery from bracket error  |
|           |  |  |  | <b>[5]</b>    |             |  |