

Integrals responses

**1** Inspection

**2** Substitution  $u = x + 2$  ( of course  $u^2 = x + 2$  )

**3** Inspection

**4** f'/f so more at home on P3

**5** Substitution  $u = x + 1$  or  $\int \frac{x+1}{(x+1)^2} - \frac{1}{(x+1)^2} dx$

**6** Inspection

**7**  $x = 2\sin u$

**8** Partial fractions

**9** Parts

**10**  $u = \sqrt{x}$  followed by partial fractions.

**11** Inspection or  $u = e^{-x}$  followed by inspection.

**12**  $u = \sqrt{x}$  still requires another substitution ( $y = 4 - u$ )