$$\int \frac{y+4}{y+16}\,dy$$

Solution:

$$\int \frac{y+4}{y+16}\,dy = \int \frac{y+16-12}{y+16}\,dy = \int \left(\frac{y+16}{y+16} - \frac{12}{y+16}\right) dy =$$

$$= \int \left(1 - \frac{12}{y+16}\right) dy = \int dy - 12\int \frac{dy}{y+16} = y - 12\int \frac{d(y+16)}{y+16} =$$

$$= y - 12ln|y+16| + C = y - ln(y+16)^{12} + C.$$

Answer:

$$y - ln(y+16)^{12} + C$$