

Warm-up problems for the Integration Bee! #3

1. $\int x^2 \sqrt{x+4} dx$

2. $\int \frac{1}{x^4 - 16} dx$

3. $\int \frac{x^2}{(x^2 + 8)^{3/2}} dx$

HINTS

1. u-sub with $u = x + 4$ then multiply
2. partial fractions
3. trig sub