

7: Perform the integration  $\int x^2(a^3 - x^3)^n dx$ .

$$\text{Ans: } -\frac{(a^3 - x^3)^{n+1}}{3(n+1)}$$

8: Perform the integration  $\int \frac{x^2}{a^3 - x^3} dx$ .

$$\text{Ans: } -\frac{1}{3} \ln[a^3 - x^3]$$

9: Perform the integration  $\int \frac{x}{a^4 + x^4} dx$ .

$$\text{Ans: } \frac{1}{2a^2} \tan^{-1}\left(\frac{x^2}{a^2}\right)$$

**Fact File 5.3: English Poetry - Dylan Thomas (1914 - 1953)**

A Welsh poet born in Swansea. After the publication of *18 Poems* in 1934 he moved to London where he worked for the BBC. A major publication for Thomas in 1946 was *Deaths and Entrances*. There was also his well known poem *And death shall have no dominion*. His famous play for voices, *Under Milk Wood*, written in 1954 became an instant success. Thomas had a powerful speaking voice and gave over 200 broadcasts for the BBC. He also had successful tours of the USA in the early 1950s. It was during his last tour that he met with his untimely end brought on by alcoholism.

