Trig – substitutions

- $\int \frac{dx}{x^2\sqrt{x^2-16}};$
- $\int \frac{x^2}{(36-x^2)^{3/2}}\ dx$
- $\int e^t\sqrt{49-e^{2t}}\,dt$
- $\int \frac{x^3}{\sqrt{x^2+25}}\ dx; \quad x=5\tan\theta$
- $\int_0^1 \frac{x^3}{\sqrt{36-x^2}}\ dx$
- $\int \frac{x^3}{\sqrt{x^2+36}}dx; \quad x=6\tan\theta$
- $\int \frac{\sqrt{4-x^2}}{x}\ dx$
- $\int \frac{dx}{x\sqrt{4x^2+9}}$
- $\int \frac{dx}{(x^2+4x+5)^2}$
- $\int \frac{dx}{(x^2+6x+10)^2}$