Trigonometric Substitution Problems:

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

2. $\displaystyle\int \frac{x^3}{\sqrt{x^2+4}}\,dx$

3. $\displaystyle\int \frac{dx}{\sqrt{4-x^2}}$

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

5. $\displaystyle\int \frac{\sqrt{x^2-4}}{x}\,dx$

6. $\displaystyle\int_0^{3\sqrt{3}} \frac{x^2}{(4x^2+9)^{3/2}}\,dx$

7. $\displaystyle\int \frac{x}{\sqrt{3-2x-x^2}}\,dx$

8. $\displaystyle\int_0^1 x\sqrt{1-x^2}\,dx$

9. $\displaystyle\int \frac{x^2}{\sqrt{9-x^2}}\,dx$

10. $\displaystyle\int_0^3 \frac{x\,dx}{\sqrt{36-x^2}}$

11. $\displaystyle\int_0^{2/3} \sqrt{4-9x^2}\,dx$

12. $\displaystyle\int_0^{1/2} x\sqrt{1-4x^2}\,dx$

13. $\displaystyle\int_0^2 \frac{dt}{\sqrt{4+t^2}}$

14. $\displaystyle\int_0^1 \frac{dx}{(x^2+1)^2}$

15. $\displaystyle\int_0^{0.6} \frac{x^2}{\sqrt{9-25x^2}}\,dx$,