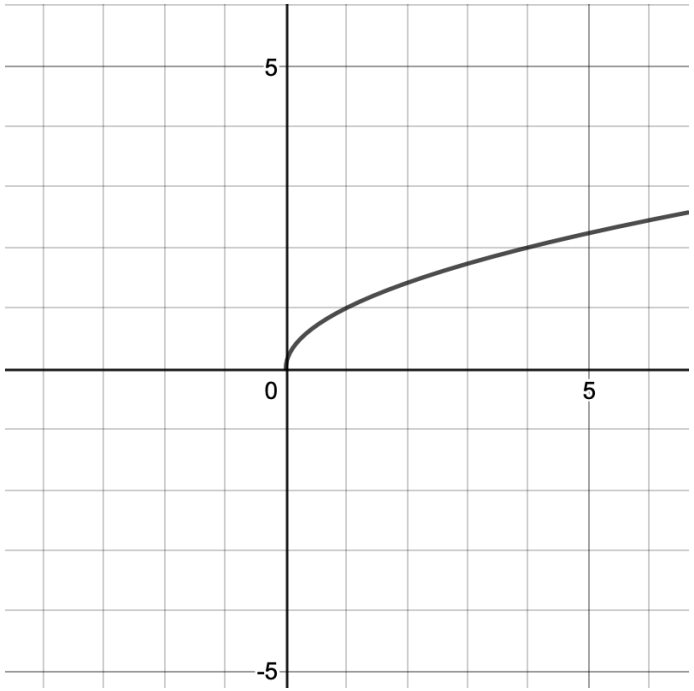
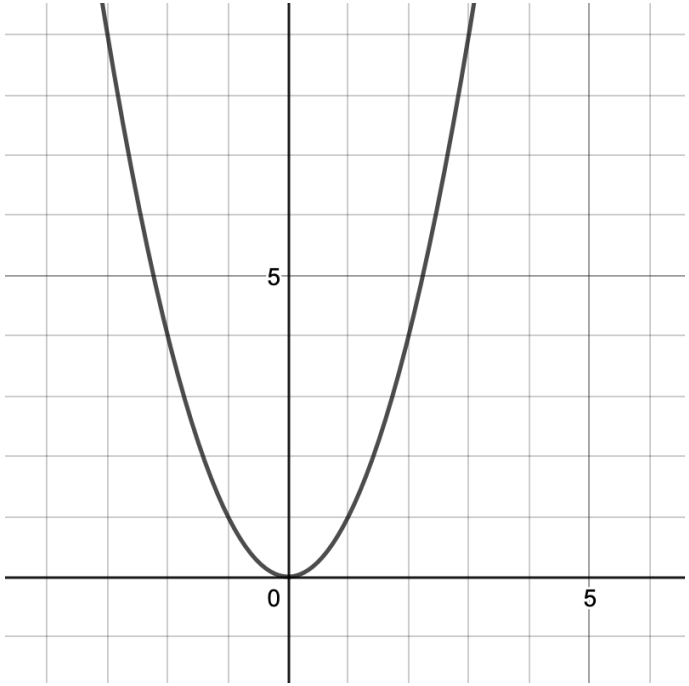
Definite Integrals and Area Under a Curve

Compute the definite integral to determine the area under the curve or net area.

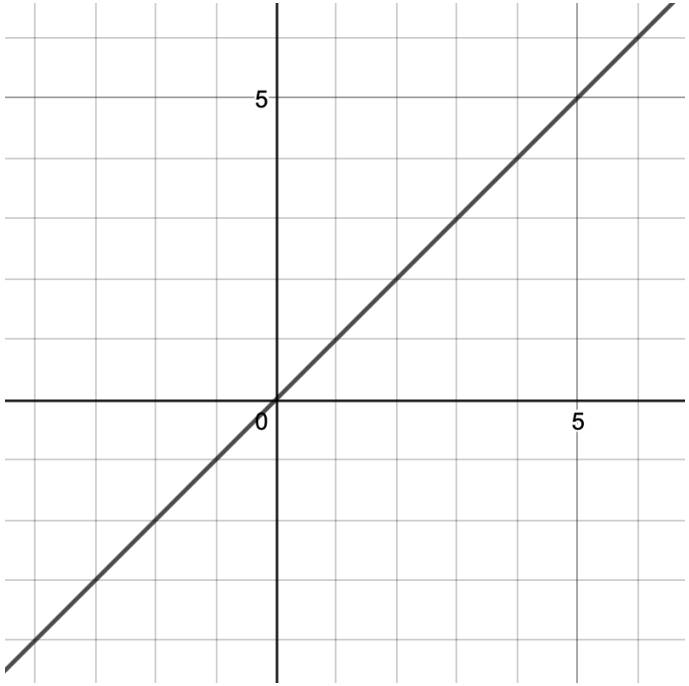
1. $\int_0^4 \sqrt{x}\, dx$



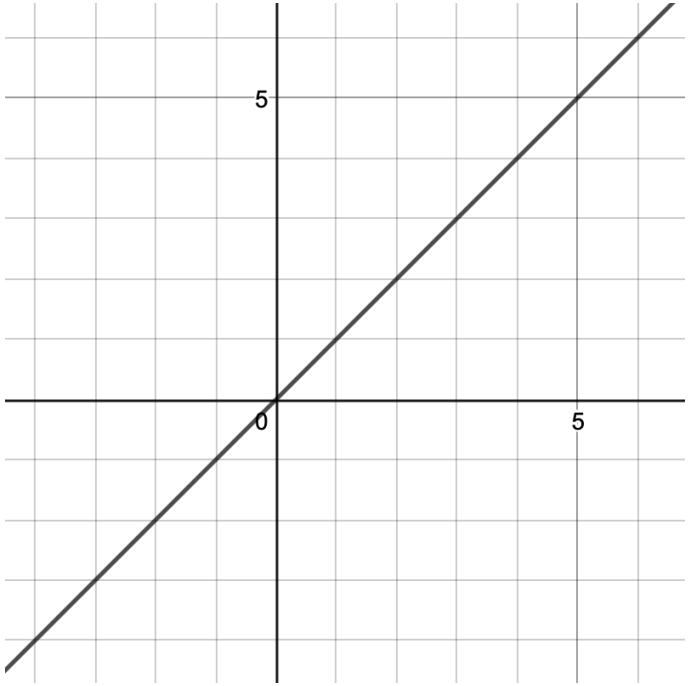
2. $\int_{-2}^{3} x^2\,dx$



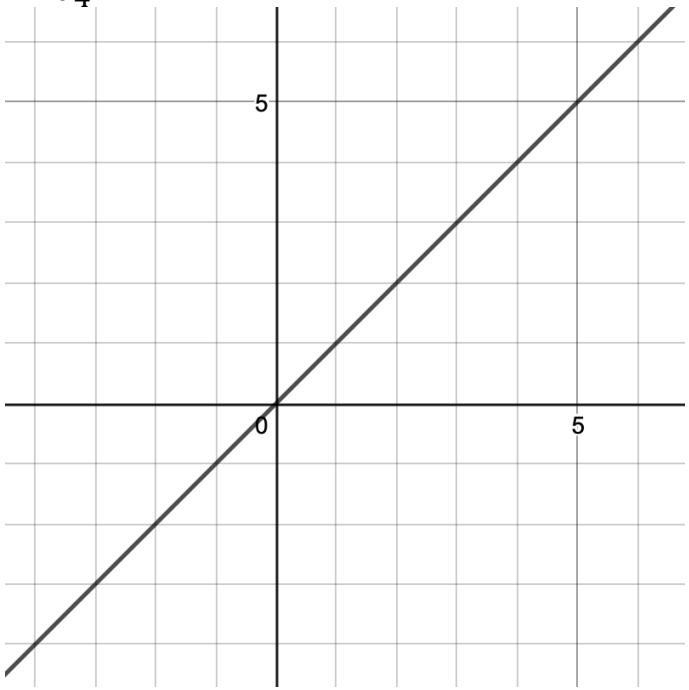
3. $\int_0^4 x dx$



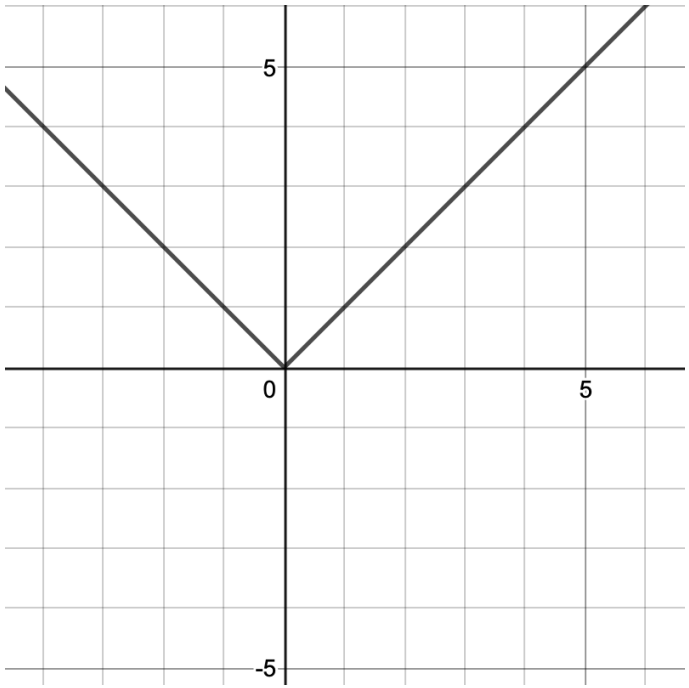
4. $\int_{-3}^{4} x\,dx$



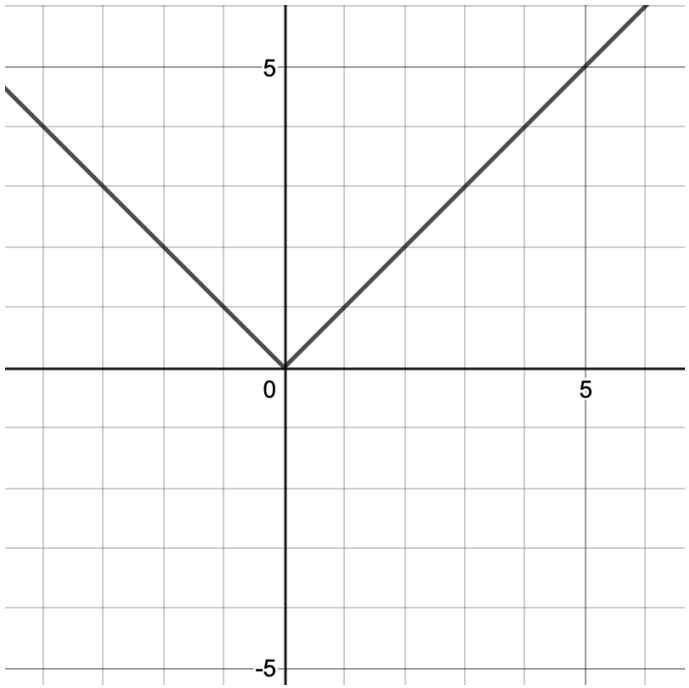
5. $\int_{4}^{-3} x\,dx$



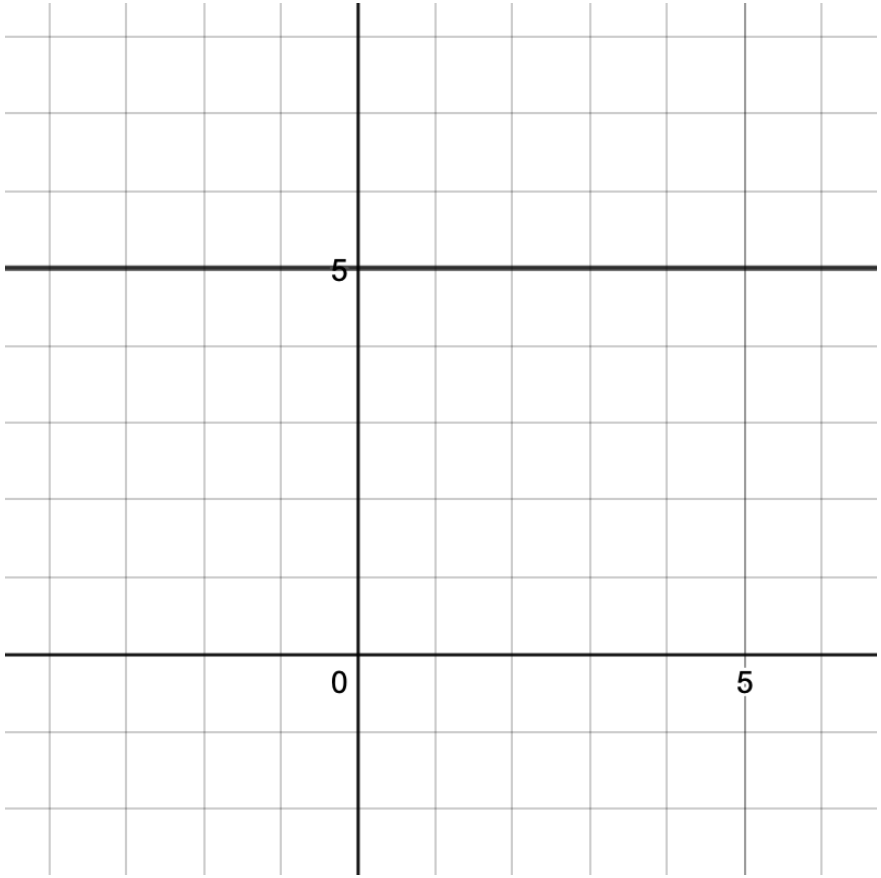
6. $\int_{-2}^{4} |x|\, dx$



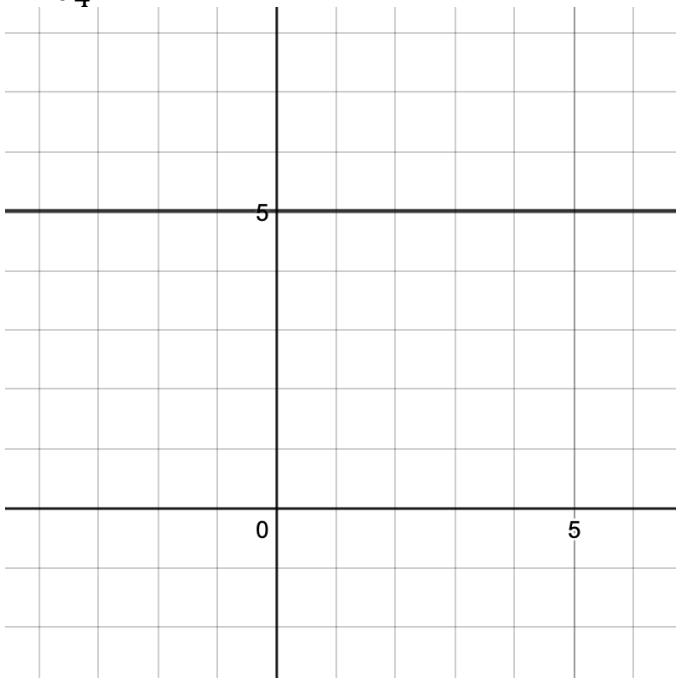
7. $\int_{-3}^{3} |x|\, dx$



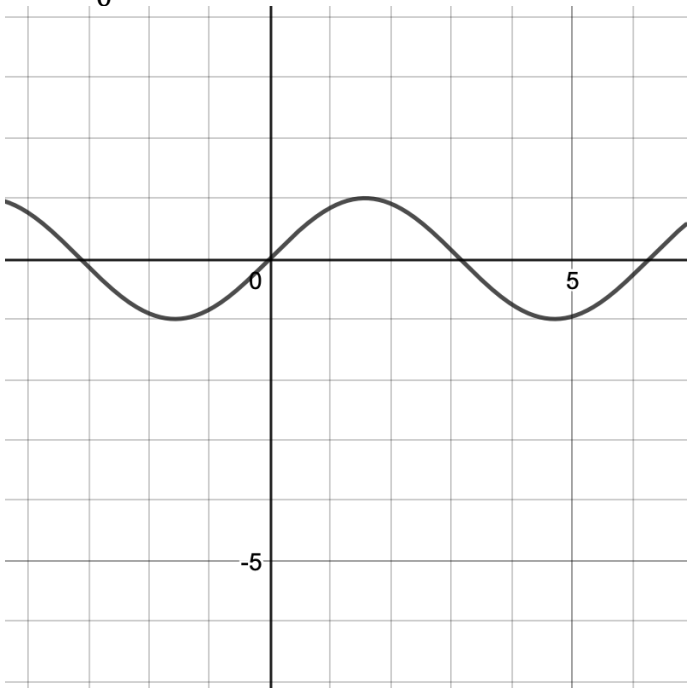
8. $\int_{-2}^{4} 5\,dx$



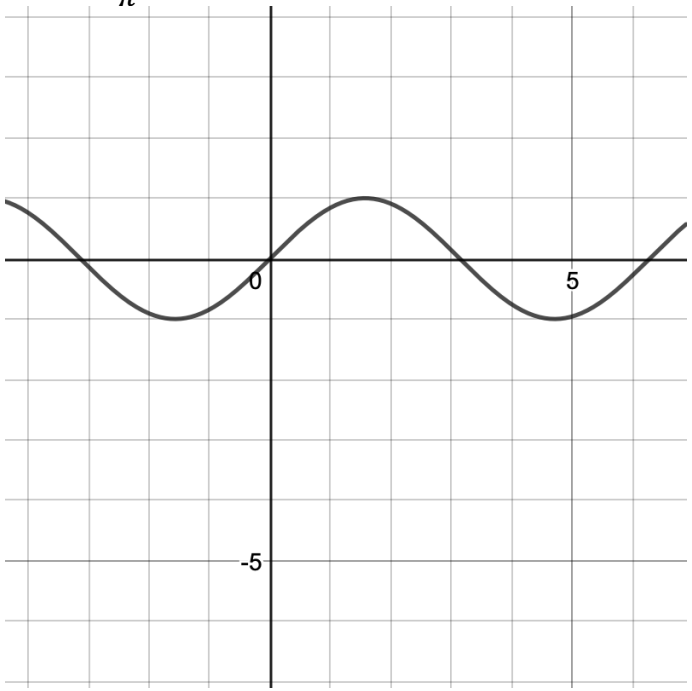
9. $\int_{4}^{-2} 5\, dx$



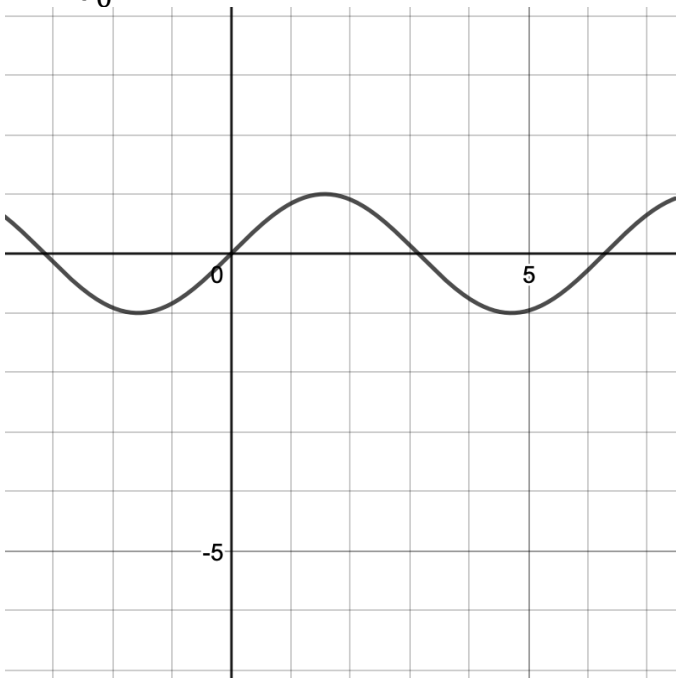
10. $\int_0^{\pi} \sin(x)\, dx$



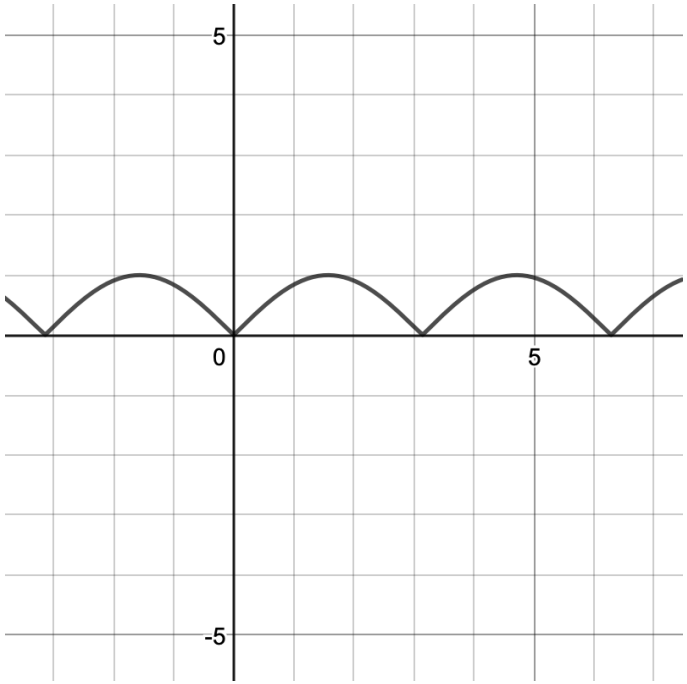
11. $\int_{-\pi}^{\pi} \sin(x)\, dx$



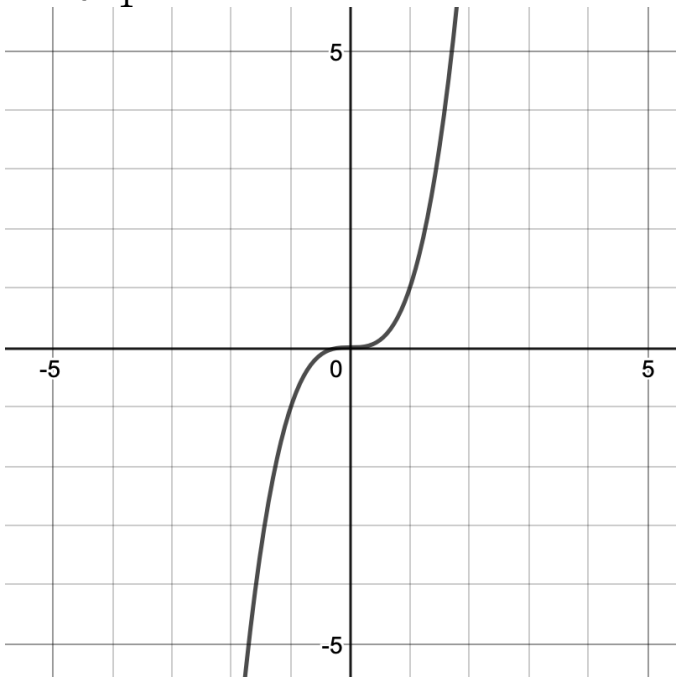
12. $\int_0^{2\pi} \sin(x)\, dx$



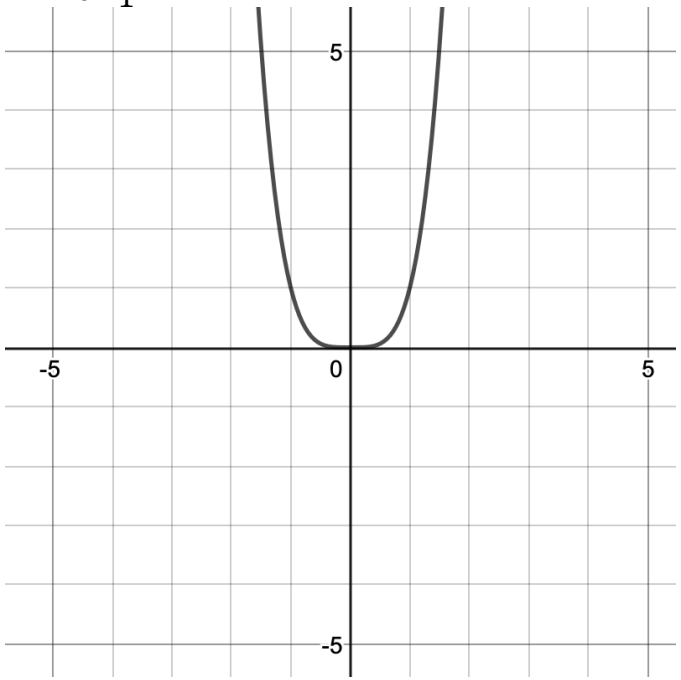
13. $\int_0^{2\pi} |\sin(x)|\, dx$



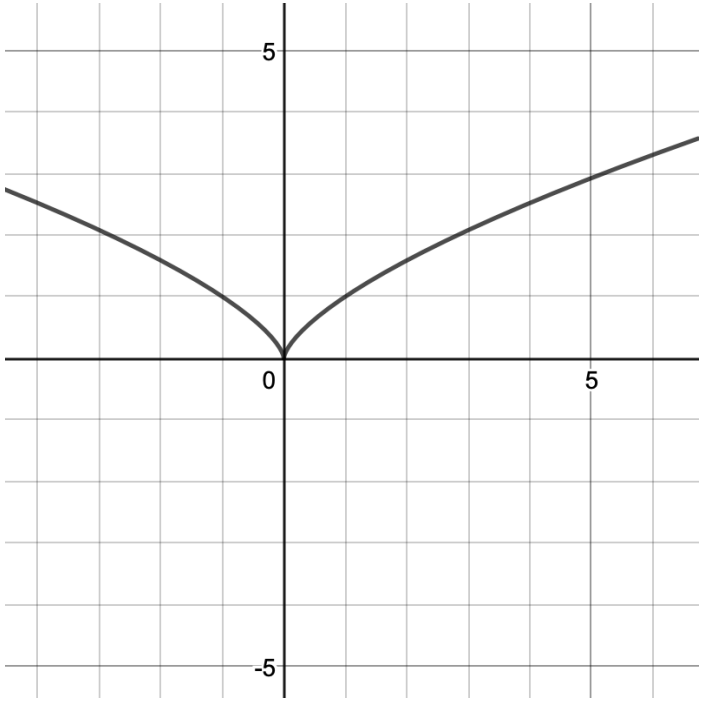
14. $\int_{-1}^{1} x^3 dx$



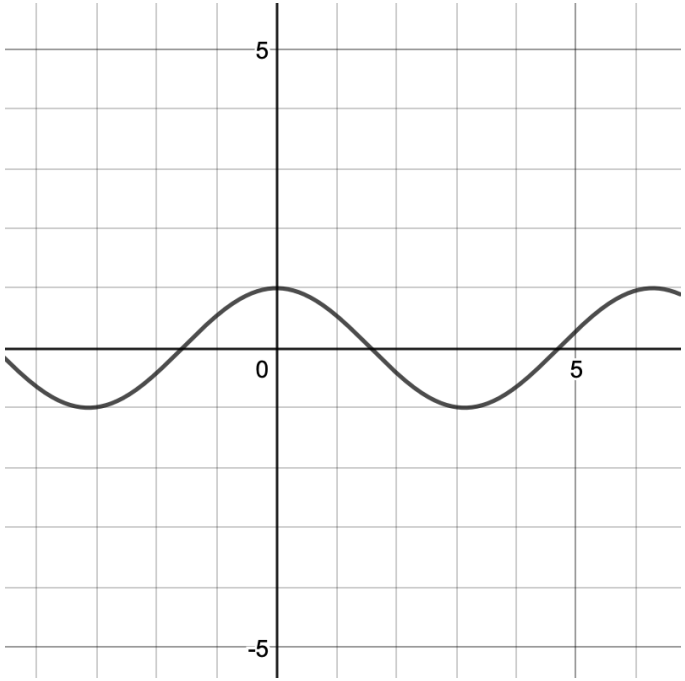
15. $\int_{-1}^{1} x^4 dx$



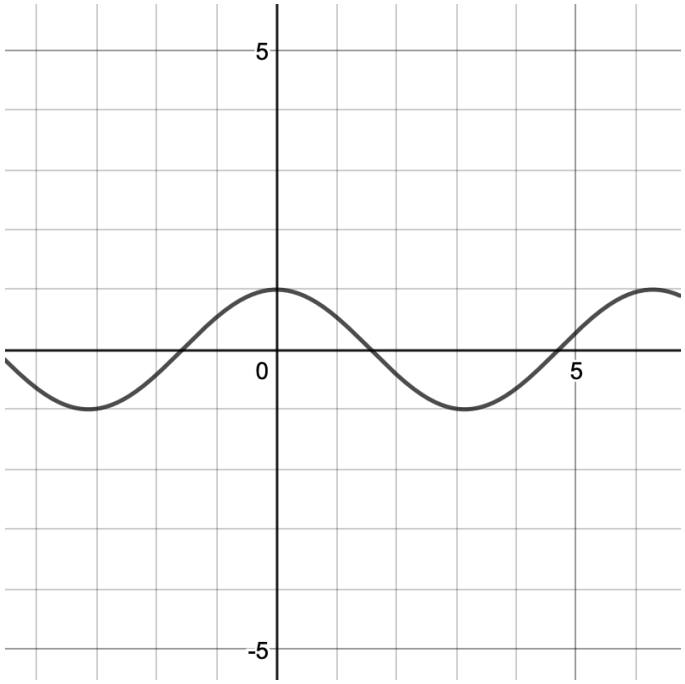
16. $\int_{-2}^{4} x^{2/3}\, dx$



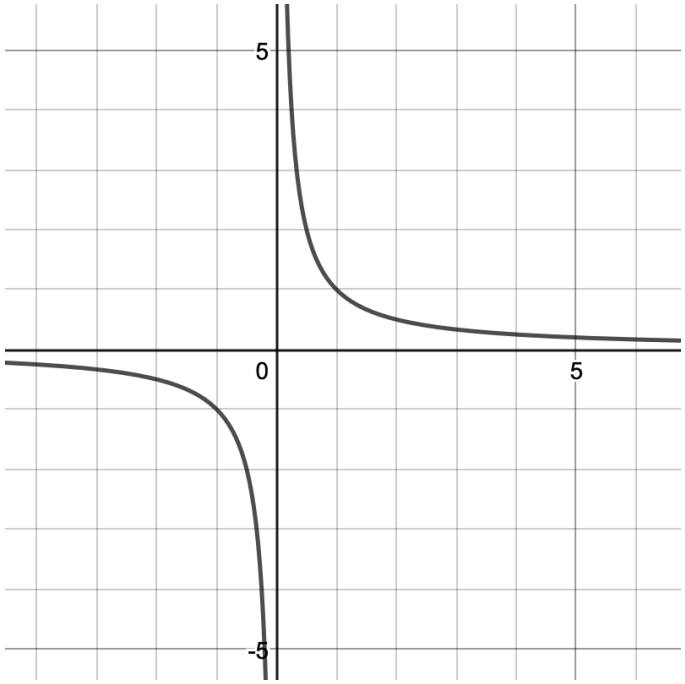
17. $\int_0^{\pi/2} \cos(x)\, dx$



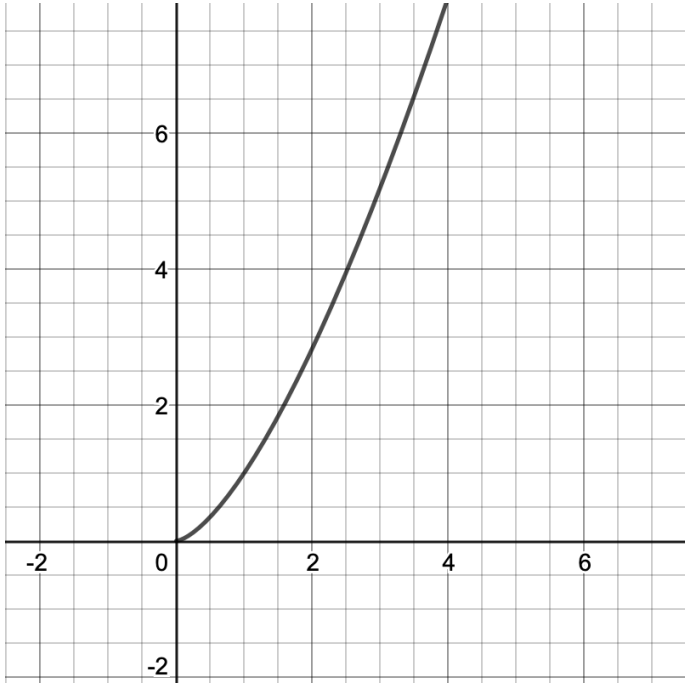
18. $\int_{-\pi}^{\pi} \cos(x)\, dx$



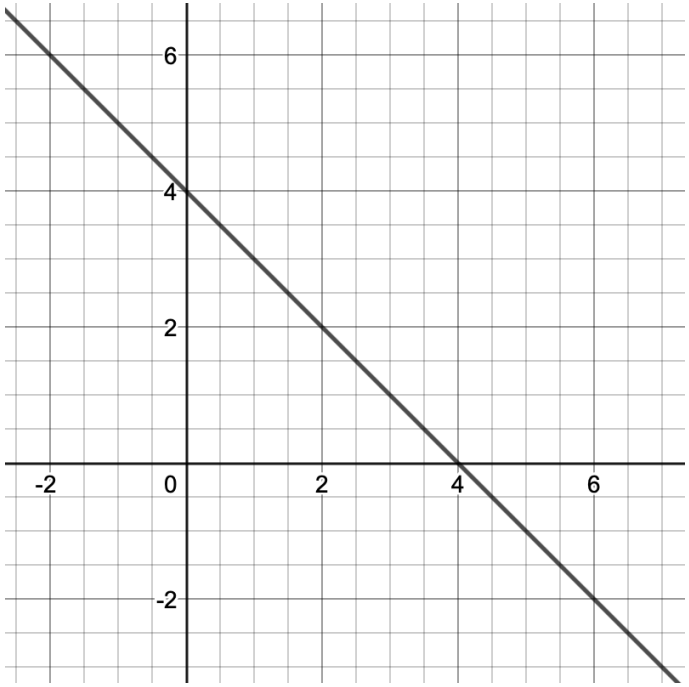
19. $\int_1^4 \frac{1}{x^2}\,dx$



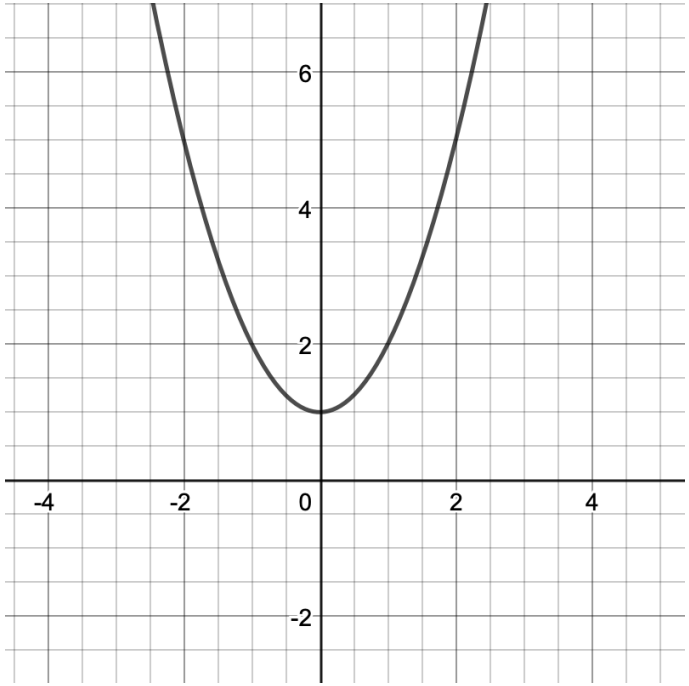
20. $\int_1^4 x\sqrt{x}dx$



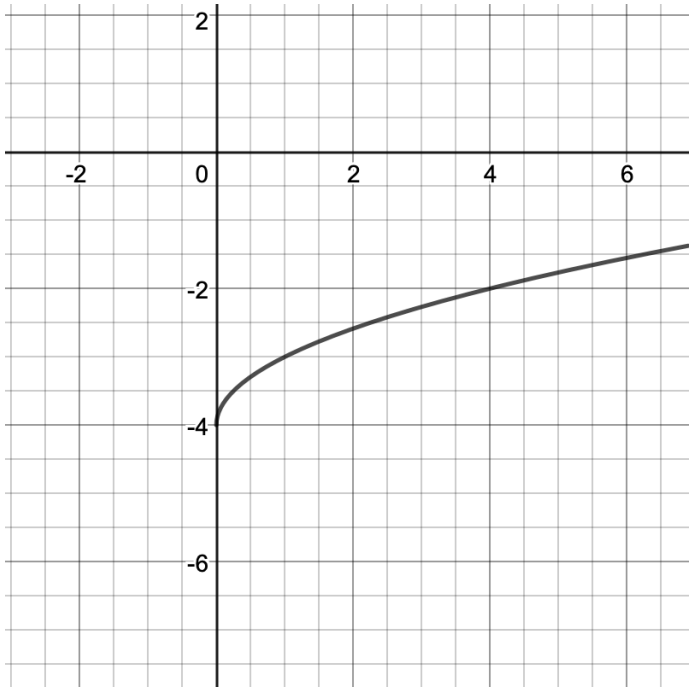
21. $\int_{-2}^{6}(4-x)\,dx$



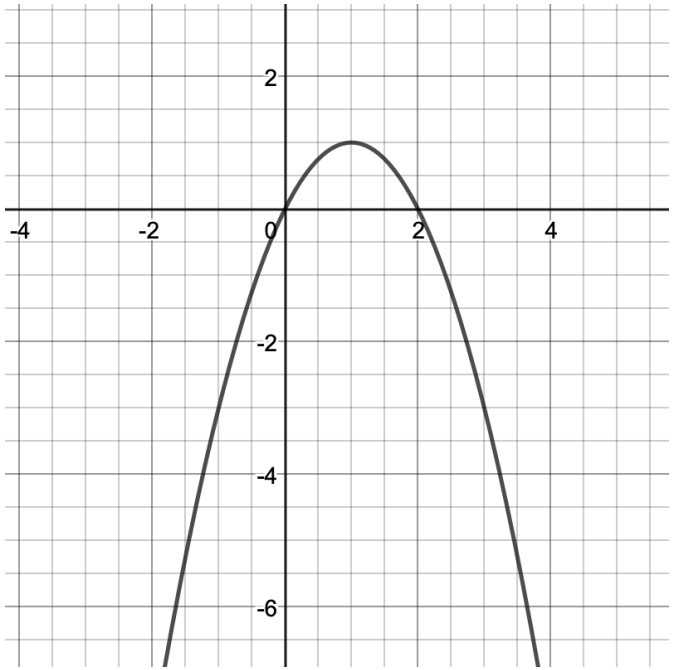
22. $\int_{-1}^{2}(x^2+1)\,dx$



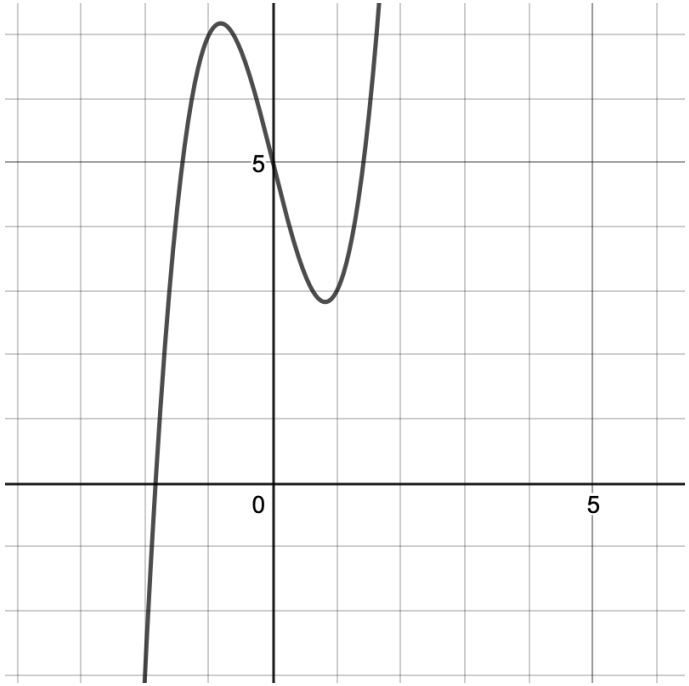
23. $\int_0^6 \left(\sqrt{x} - 4\right) dx$



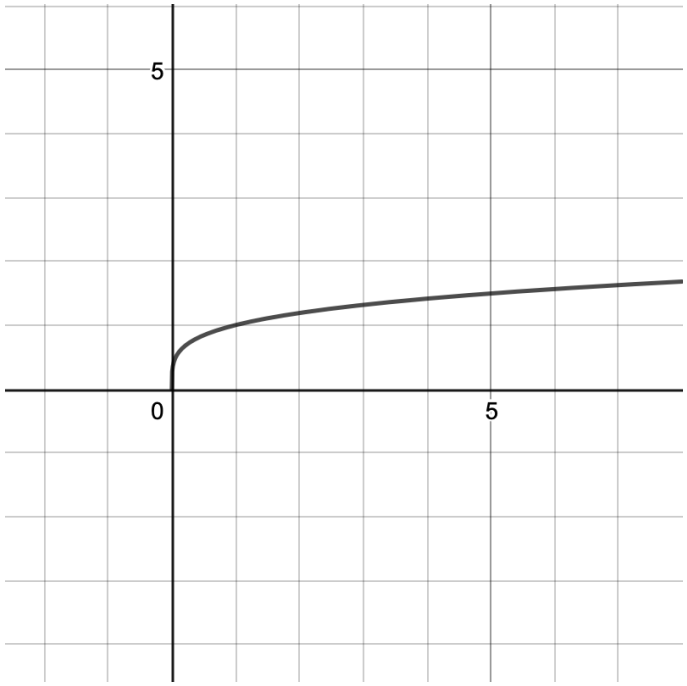
24. $\int_0^2 (2x - x^2)dx$



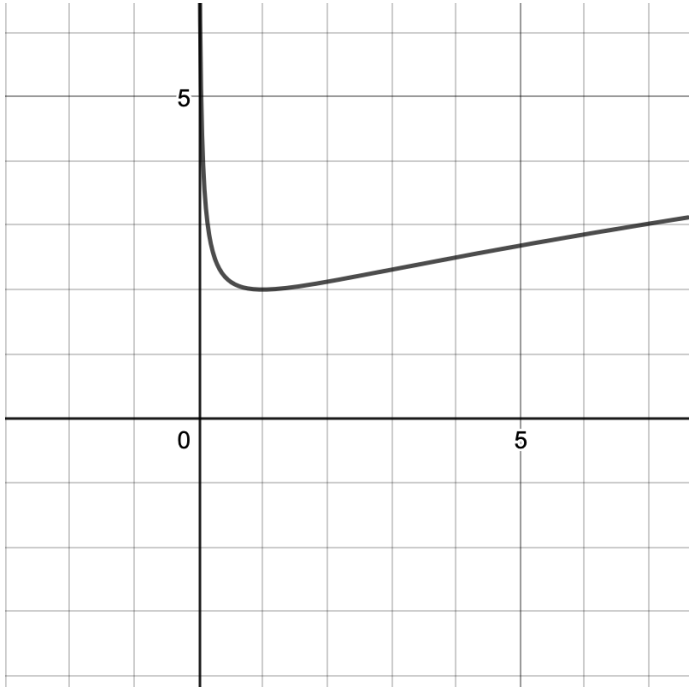
25. $\int_{-1}^{1}(2x^3 - 4x + 5)\,dx$



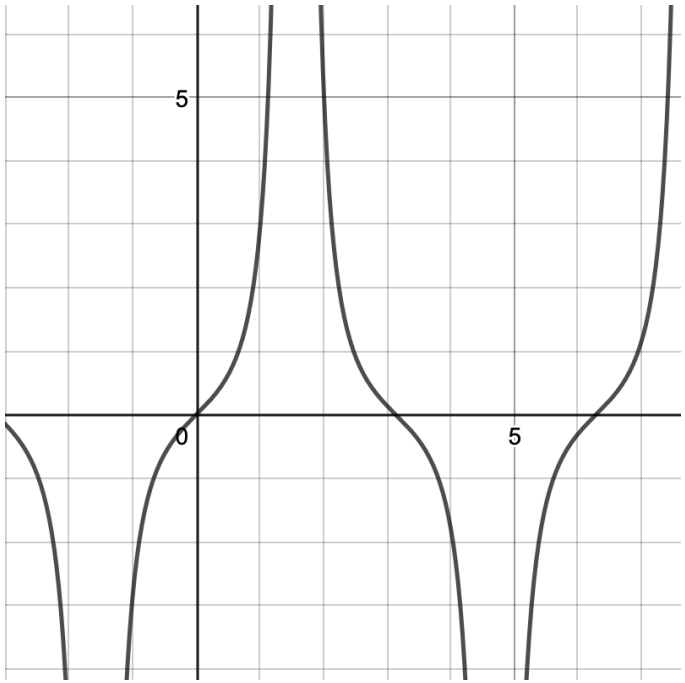
26. $\int_0^5 \sqrt[4]{x}\,dx$



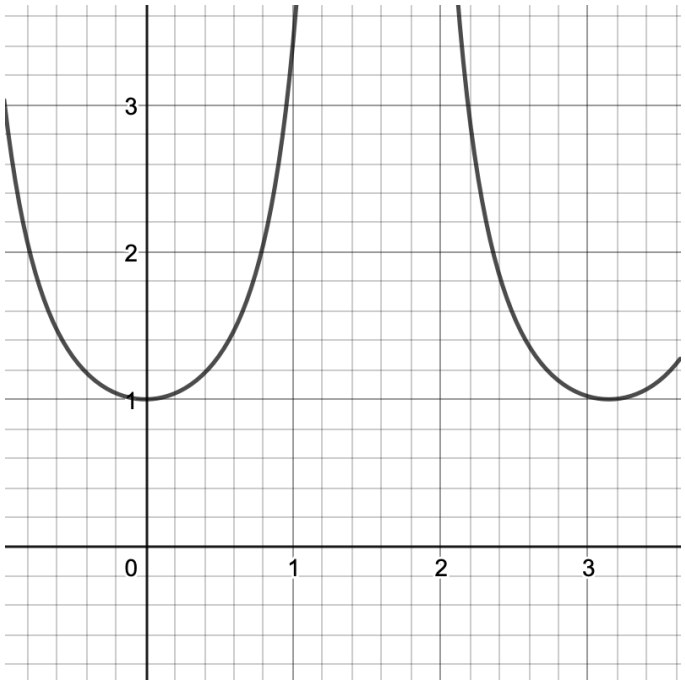
27. $\int_1^5 \frac{x+1}{\sqrt{x}}\,dx$



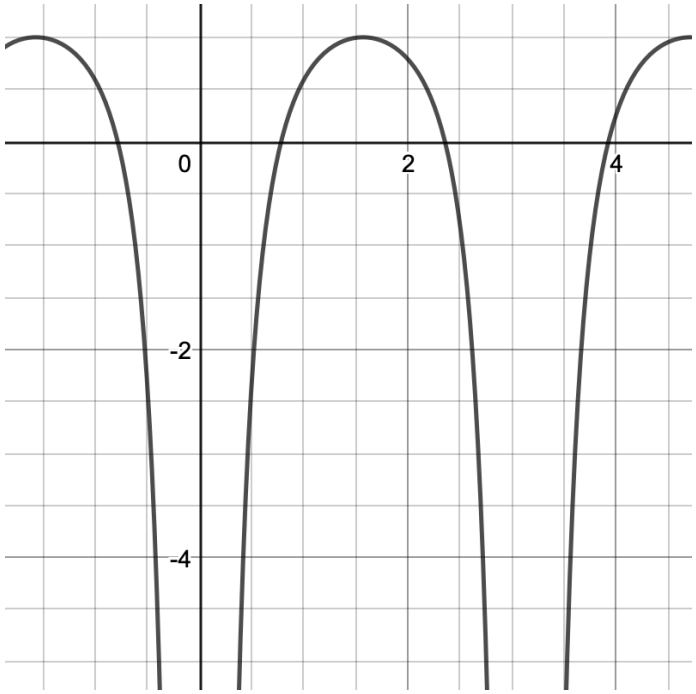
28. $\int_0^{\pi/6} \sec(\theta)\, tan(\theta) d\theta$



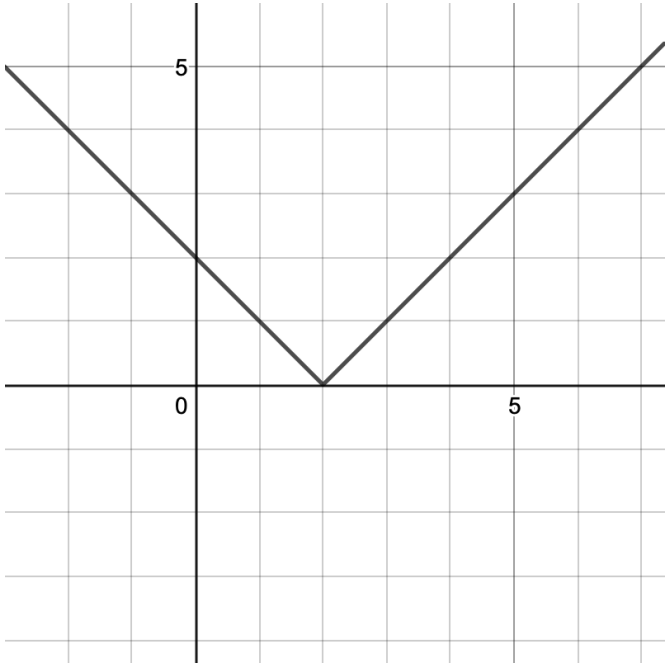
29. $\int_0^{\pi/4} sec^2(\theta)\, d\theta$



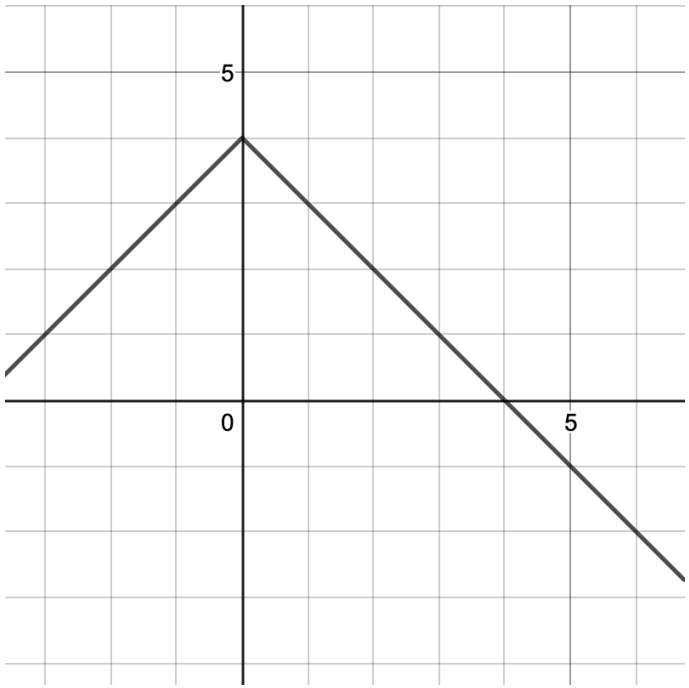
30. $\int_{\pi/4}^{3\pi/4}(2 - csc^2(x))dx$



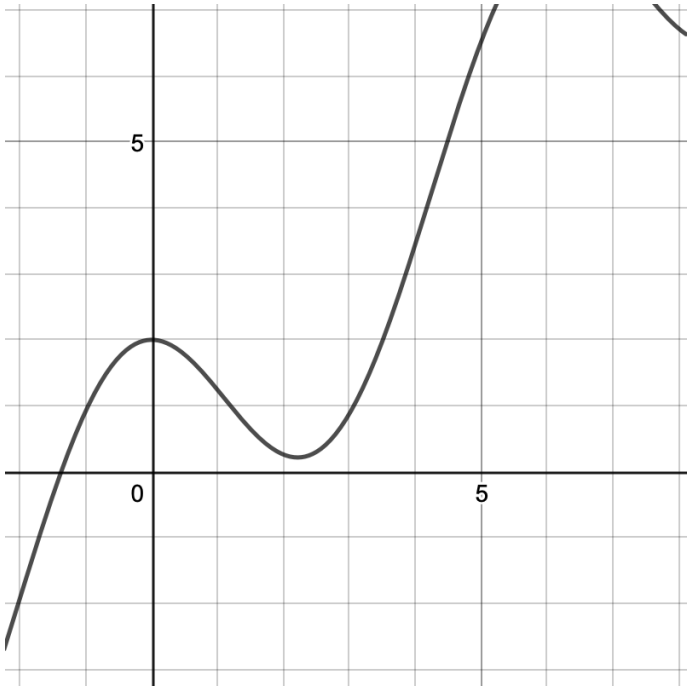
31. $\int_{-1}^{3} |x-2|\,dx$



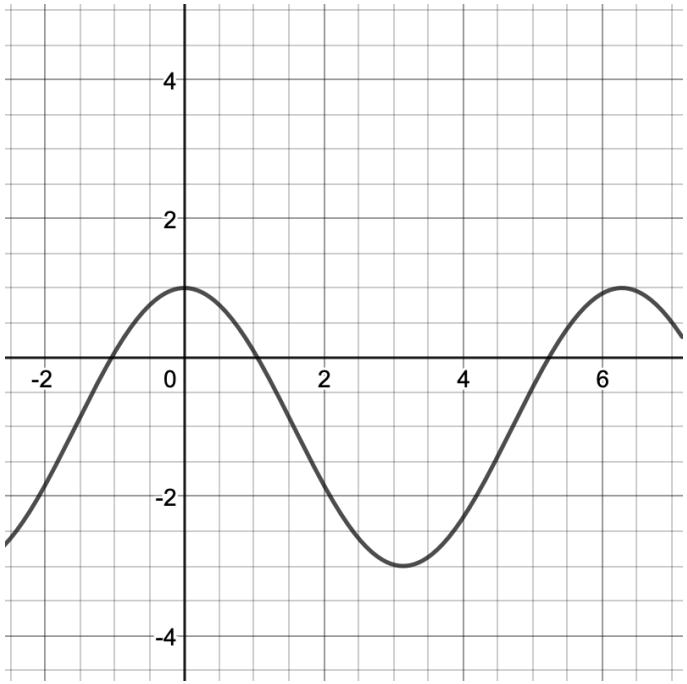
32. $\int_{-1}^{3}(4-|x|)\,dx$



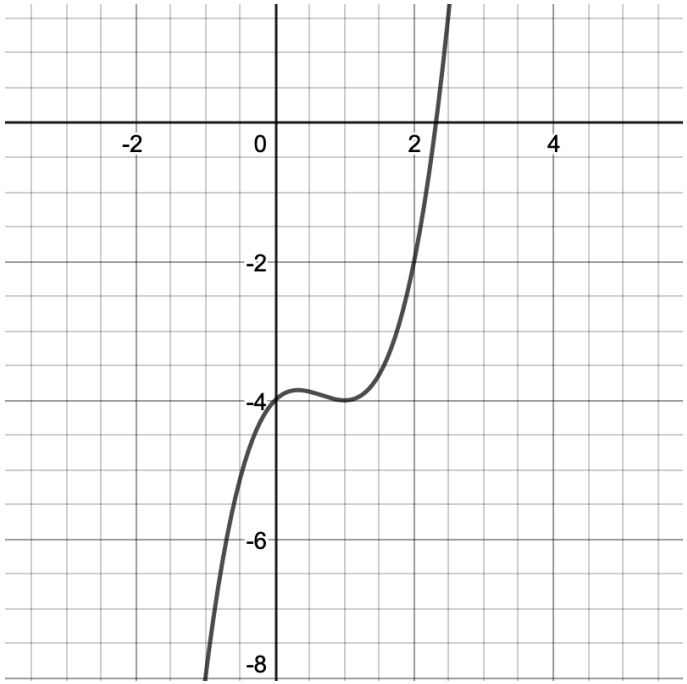
33. $\int_0^{\pi}\left(\theta - sin(\theta) + 2cos(\theta)\right) d\theta$



34. $\int_0^{2\pi}(2cos(\theta)-1)$



35. $\int_0^2 (x^3 - 2x^2 + x - 4)dx$



36. $\int_{-5}^{5}(2|x-1|+3)\,dx$