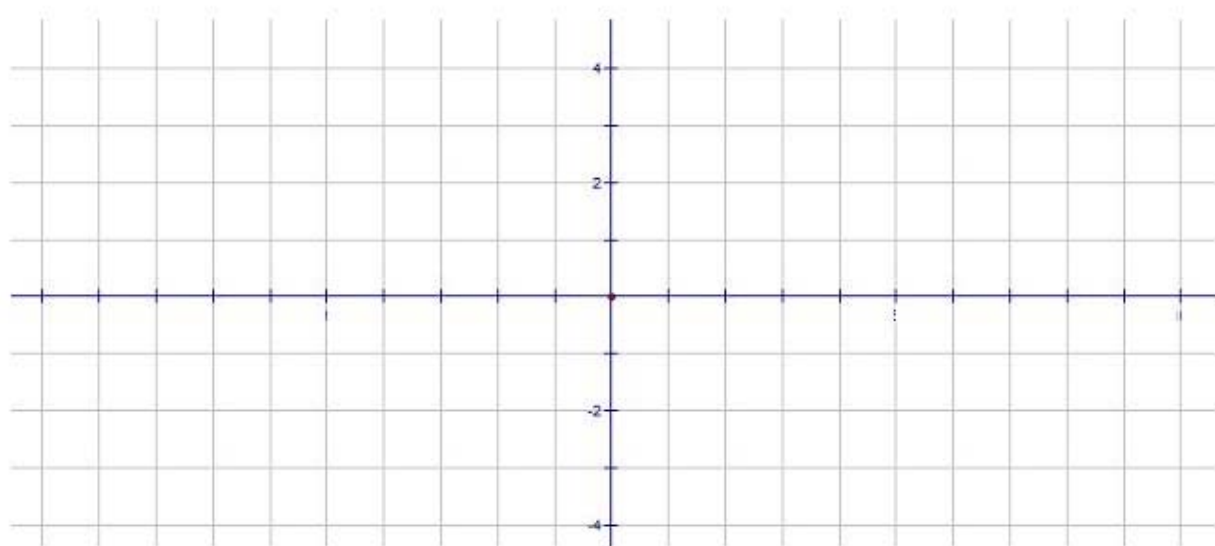


Show all of your work on looseleaf with the exception of #1.

1. Graph 2 cycles of the function $f(x) = -2 \cos(4x - \pi/2) + 1$



2. Solve. $(4x + 3)(x + 4) - (x - 1)(x - 3) = 3x(x - 2)$
3. Solve. $\frac{-2}{3x+1} = \frac{x}{4}$
4. Solve. $\sqrt{x-2} = 3 - \sqrt{7-x}$
5. Simplify. $2(x-3)^2 - (2x+1)(3x-4)$
6. If the 7th term of an arithmetic sequence is 41 and the 13th term is 77, find a) the general term u_n , b) the 50th term, and c) the sum of the first 50 terms.
7. If the 2nd term of a geometric sequence is -6 and the 5th term is 162, find a) the general term u_n , b) the 9th term, and c) the sum of the first 9 terms.
8. Given $f(x) = \ln(x - 2) + 4$. Find $f^{-1}(x)$.
9. Evaluate $\log \sqrt[4]{x^{16}y^4}$ when $\log x = 5$ and $\log y = 2$.
10. Find the zeros of the function $f(x) = x^4 - 3x^3 + 7x^2 - 15x + 10$.