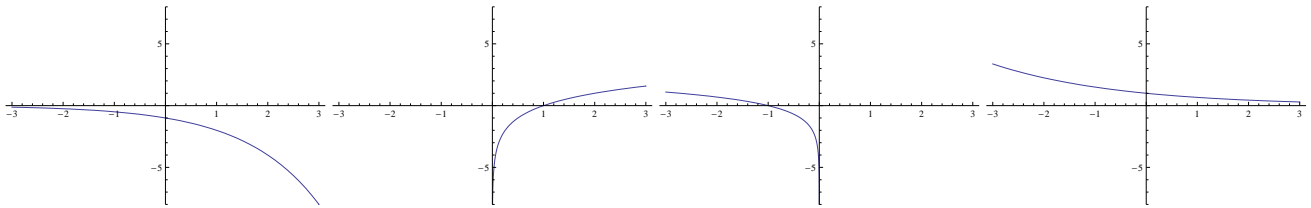


Show work for problems 1, 2, 4, and 6; use the back of the sheet if necessary.

1. (4 points) Write $\frac{2-2i}{1+i}$ in the form $a + bi$.

2. (3 points) Using either synthetic or long division, find the quotient and remainder of the operation $\frac{3x^3-12x^2+10}{x-2}$.

3. (4 points) The four following graphs are of the functions $f(x) = -(2^x)$, $g(x) = \left(\frac{2}{3}\right)^x$, $h(x) = \ln(-x)$, and $r(x) = \log_2 x$. Label which one is which.



4. (3 points) Find the domain of the function $f(x) = \frac{1}{x-2} - \log_{10}(x+3)$.

5. (3 points) Evaluate the following three logarithms:

- $\log_5 1 =$
- $\log_3 \frac{1}{27} =$
- $\log_{25} 5 =$

6. (3 points) Simplify and evaluate $2 \log_2 \frac{1}{6} - \frac{1}{2} \log_2 25 + \log_2 45$.