Curve Sketching Worksheet

1. Domain -- find it.

2. Symmetry – check for the following:
   - even – f(-x)=f(x) -- and odd – f(-x)=-f(x) -- functions;
   - functions that have symmetry about some displaced point;
   - periodicity.

3. Intercepts – f(0), and those values of x – the roots – such that f(x)=0

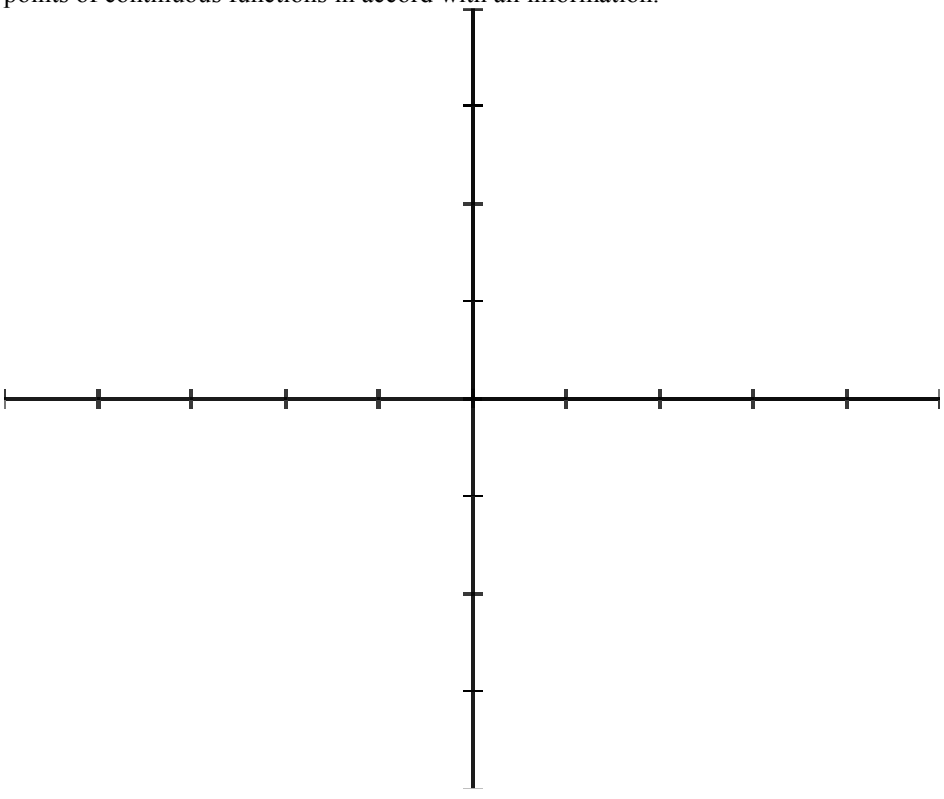
4. Asymptotes - vertical, horizontal, slant

5. Compute f'(x). Find
   - Intervals of increase or decrease - use the Increasing/Decreasing Test, based on the sign of the first derivative.
   - Local maxima and minima – use the first or second derivative tests.

6. Compute f''(x). Find concavity and points of inflection, where f''(x) changes sign.

7. Compute some points on the curve, especially any that are easy to calculate.

8. Sketch the curve - sketch asymptotes as dashed lines; plot any known points on the curve (e.g. intercepts); finish by connecting the points of continuous functions in accord with all information.



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