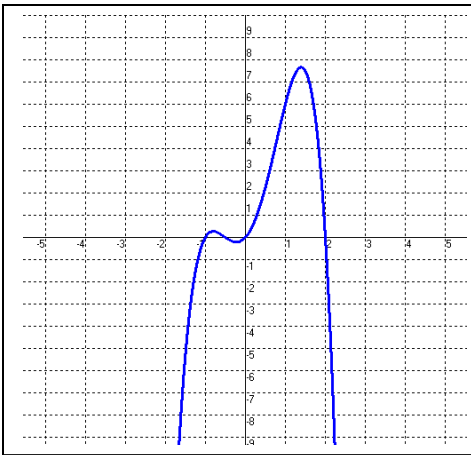


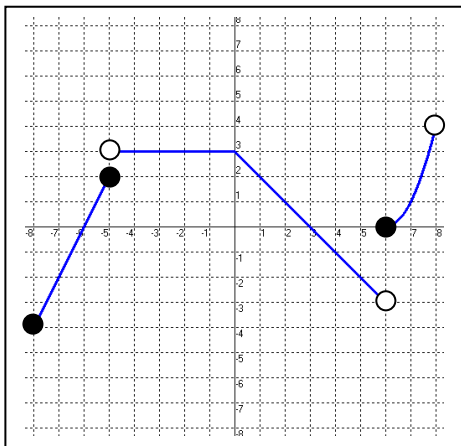
This is the graph of $f(x)$.

1. Mark with an X the point(s) of inflection.
2. On what interval(s) is $f'(x) > 0$?
3. On what interval(s) is $f'(x) < 0$?
4. On what intervals is $f(x) < 0$?
5. What are the zeros of $f(x)$?



This is the graph of $f'(x)$.

6. Where are the relative maxima of f ?
7. Where are the relative minima of f ?
8. Where is f decreasing?
9. Where is f increasing?
10. Where is the ABSOLUTE maximum of f on $[-1, 3]$?
- *11. Where is/are the point(s) of inflection of f ?



This is the graph of $g'(x)$.

12. On what interval(s) is $g(x)$ decreasing?
13. Where is the minimum value of $g(x)$?
14. On what interval(s) is $g(x)$ increasing?
15. For what value(s) of x is $g'(x) = -1$?
16. For what values of x is $g''(x) = -1$?

Given $f'(x) = -2\cos\left(\frac{\pi x}{4}\right)$ on the interval $[-4, 4]$:

17. Where are the relative maxima of f on $[-4, 4]$.

18. On what interval(s) is f increasing?

19. For what values of x is $f''(x) = 0$?

20. On what interval(s) is f decreasing?

21. For what values of x is $f'(x) = 0$?

Given $h'(x) = x^2 - 2x - 3$ on the interval $[-2, 4]$:

27. Find $h'(0)$.

28. For what values of x is $h'(x) = 0$ on $[-2, 4]$?

29. For what values of x is h increasing on $[-2, 4]$?

30. Where is the point of inflection of h on $[-2, 4]$?

31. Where is/are the relative minima of h on $[-2, 4]$?

Given $f(x) = -|x^2 - 4|$ on $[-3, 3]$:

37. For what values of x on $[-3, 3]$ is f concave down?

38. For what values of x is f increasing?

39. For what values of x is $f(x) = -4$?

40. For what values of x is $f'(x) < 0$?

41. For what values of x is $f'(x) = 0$?

Given the function $g(x) = \frac{1}{2}x(2x - 3)(x + 1)$ on $[-2, 2]$:

22. Where is $g(x) = 0$ on $[-2, 2]$

23. Where are the relative maxima of g on $[-2, 2]$

24. Where is $g'(x) < 0$ on $[-2, 2]$?

25. Find the maximum value of g on $[-2, 2]$.

26. Where is $g(x) > 0$ on $[-2, 2]$?

Given $p'(x) = \tan\frac{\pi x}{2}$ on $(-2, 2)$:

32. Find the slope of the tangent line to p at $x = 1.5$

33. For what values of x on $(-2, 2)$ is p increasing on $(-2, 2)$?

34. For what values of x is the tangent line to p a vertical line on $(-2, 2)$?

35. Where is/are the relative maxima of p on $(-2, 2)$?

36. For what values of x is $p'(x) < 0$ on $(-2, 2)$?

Given $g'(x) = \begin{cases} 2x + 3 & -4 \leq x < 0 \\ -x + 4 & 0 \leq x \leq 5 \end{cases}$

42. For what values of x is $g'(x) < 0$?

43. Where is/are the relative maxima of g ?

44. Where is g increasing?

45. Where is $g''(x) = -1$?

46. Where is g decreasing?