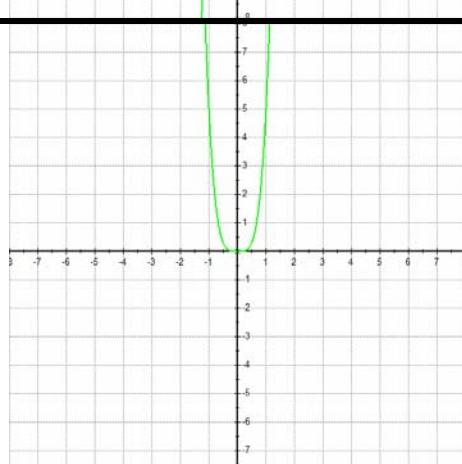
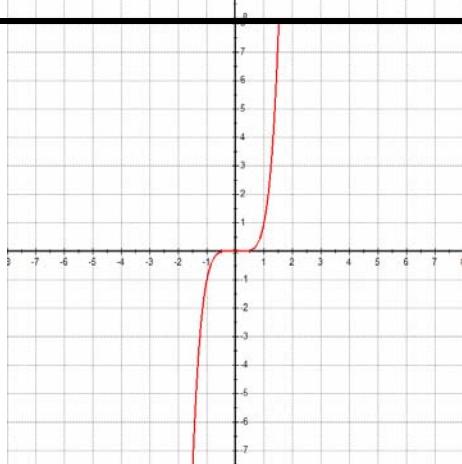
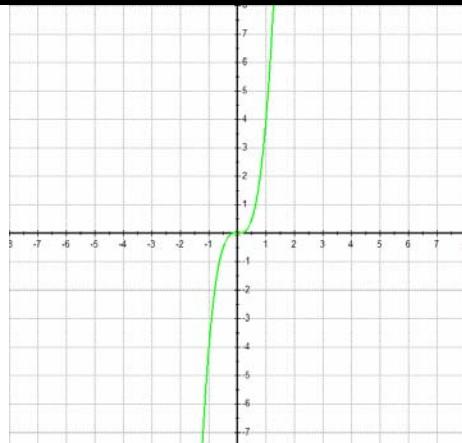
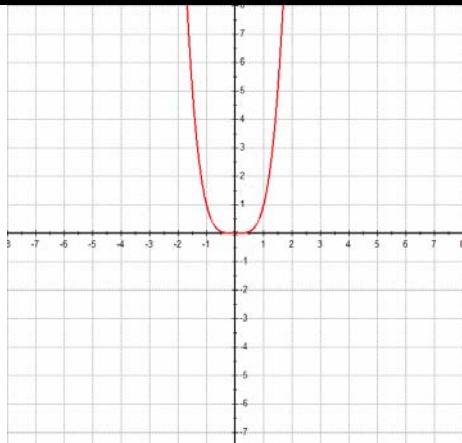
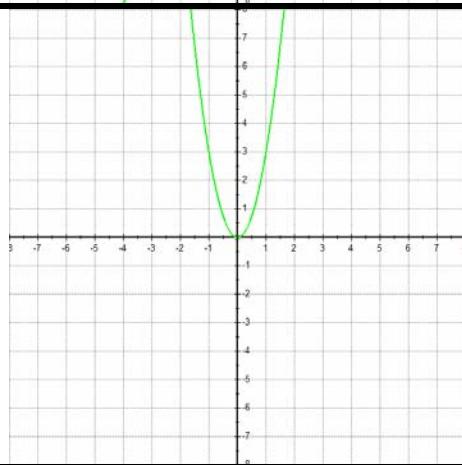
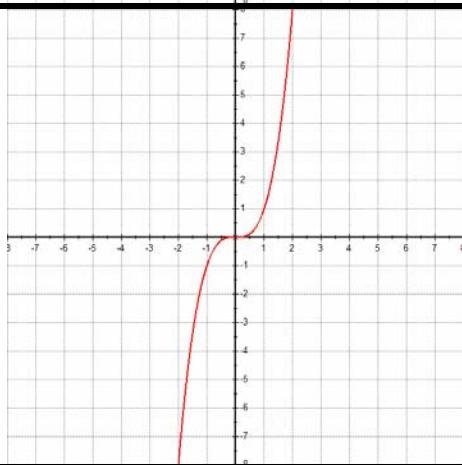
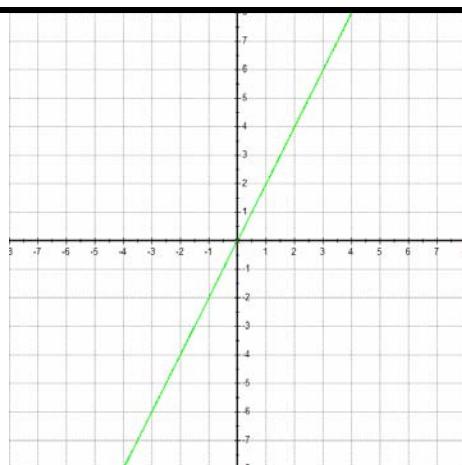
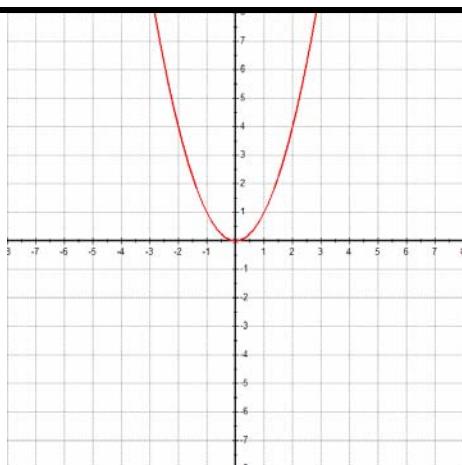


Finde zu den
roten Funktionen
die grünen Ableitungen!

$$f(x) = x^2$$

$$f'(x) = 2x$$

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$$f(x) = x^3$$

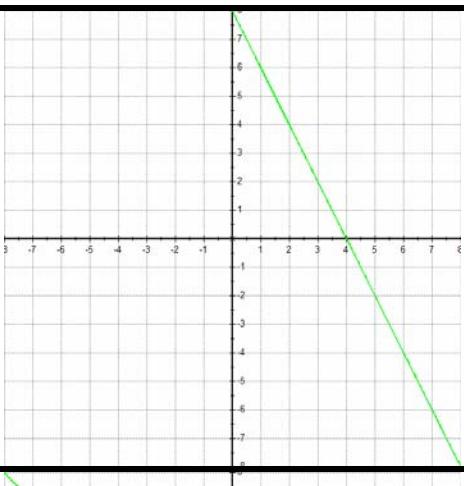
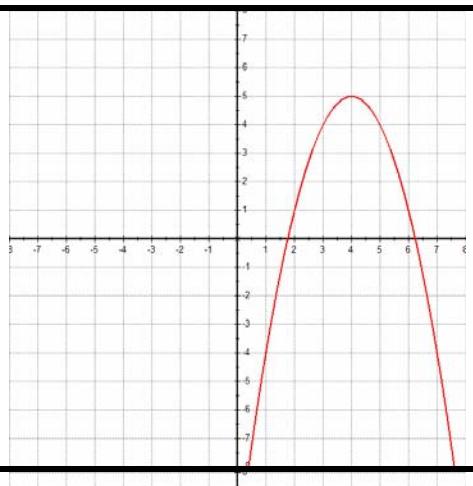
$$f'(x) = 3x^2$$

$$f(x) = x^4$$

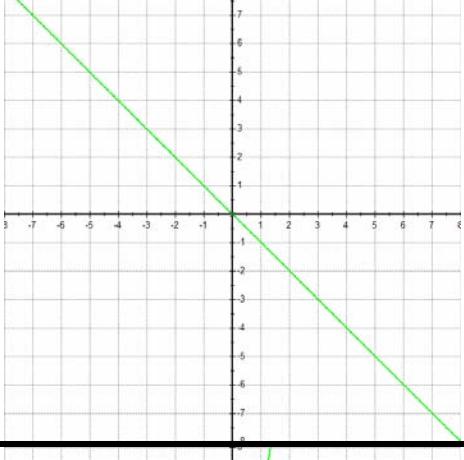
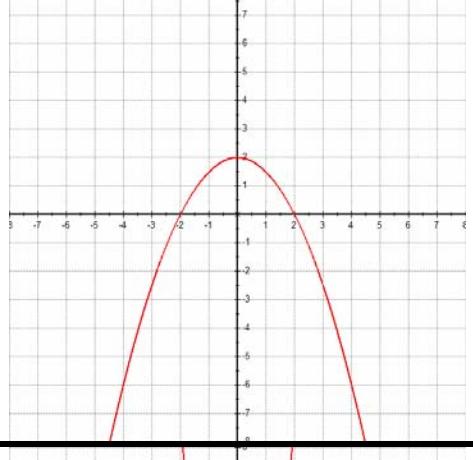
$$f'(x) = 4x^3$$

$$f(x) = x^5$$

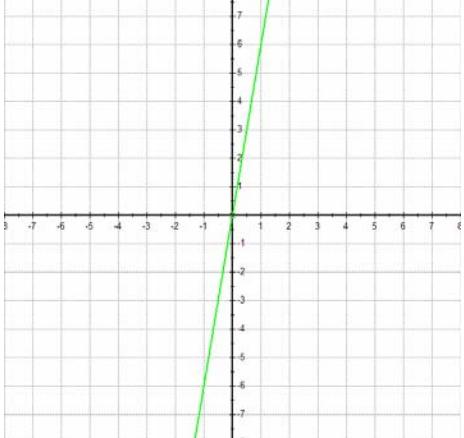
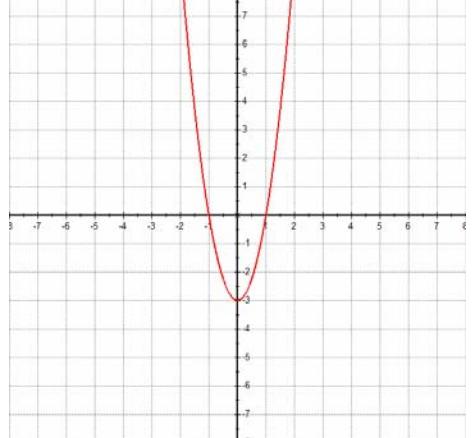
$$f'(x) = 5x^4$$



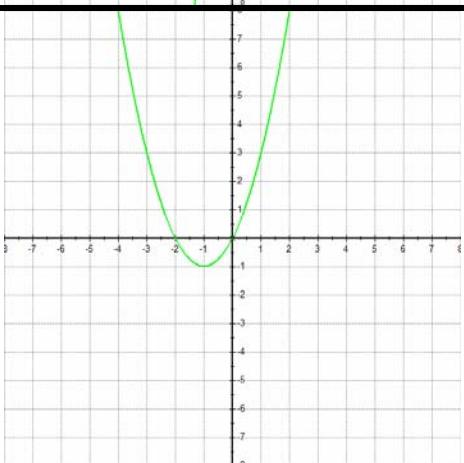
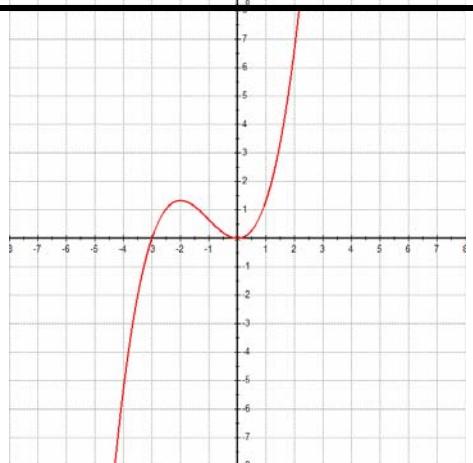
$$f(x) = -(x - 4)^2 + 5$$
$$f'(x) = -2x + 8$$



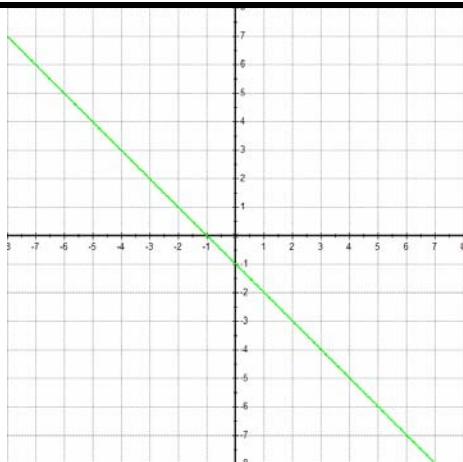
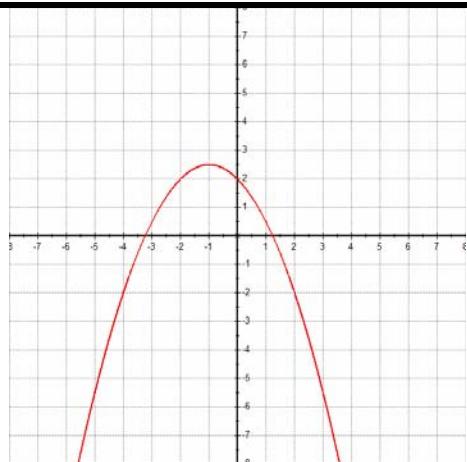
$$f(x) = -\frac{1}{2}x^2 + 2$$
$$f'(x) = -x$$



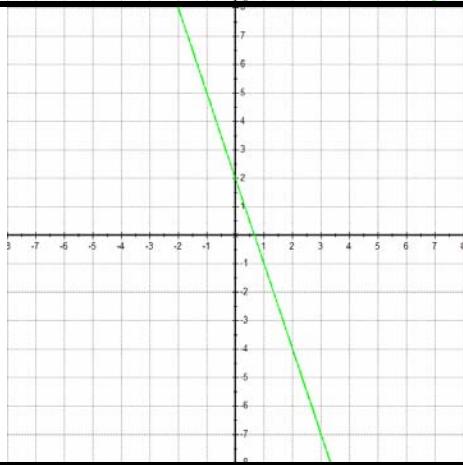
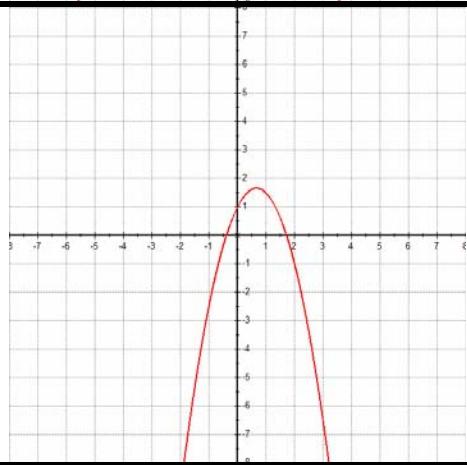
$$f(x) = 3x^2 - 3$$
$$f'(x) = 6x$$



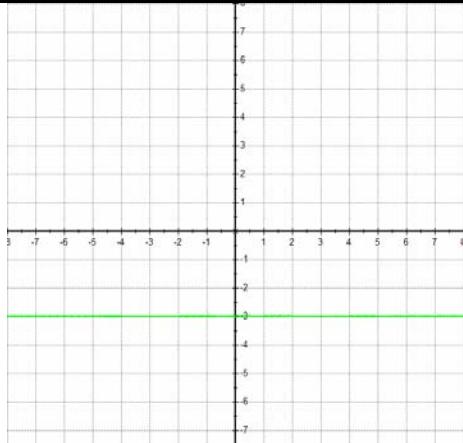
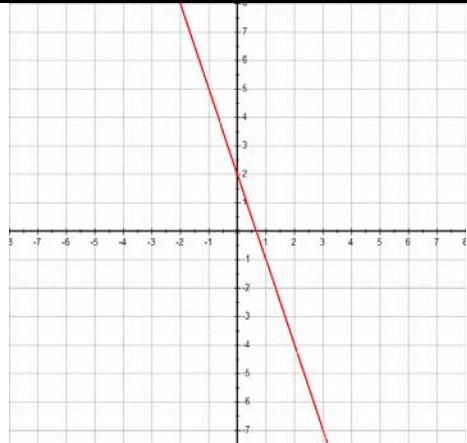
$$f(x) = \frac{1}{3}x^3 + x^2$$
$$f'(x) = x^2 + 2x$$



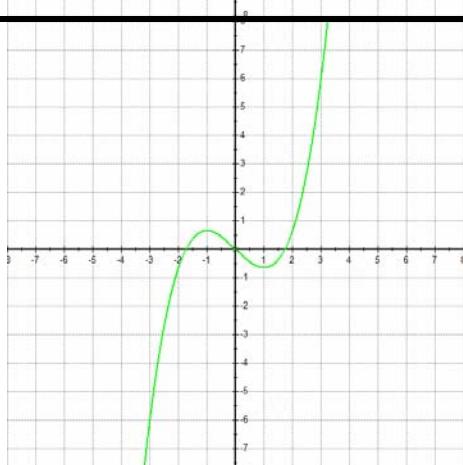
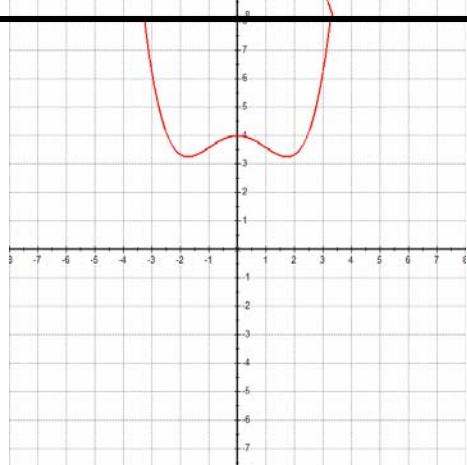
$$f(x) = -\frac{1}{2}x^2 - x + 2$$
$$f'(x) = -x - 1$$



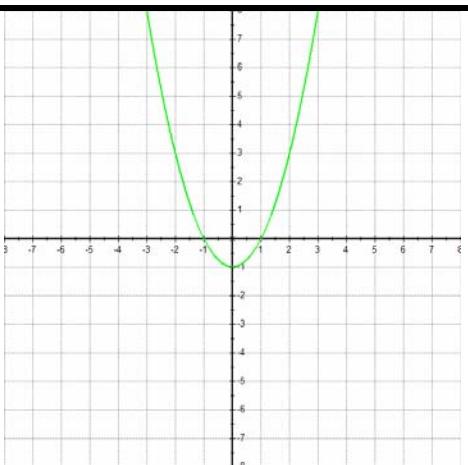
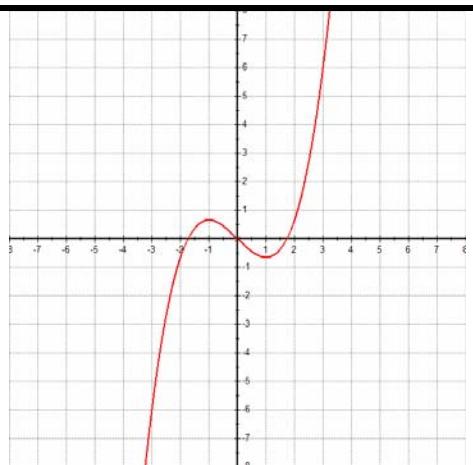
$$f(x) = -\frac{3}{2}x^2 + 2x + 1$$
$$f'(x) = -3x + 2$$



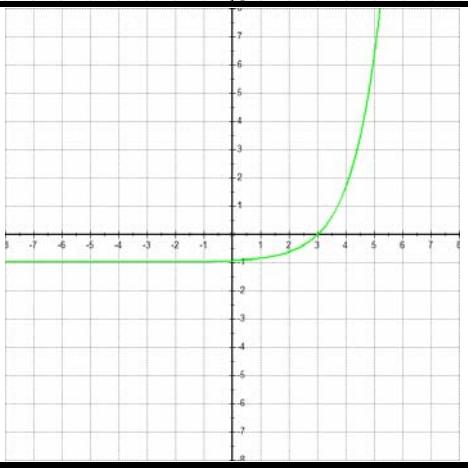
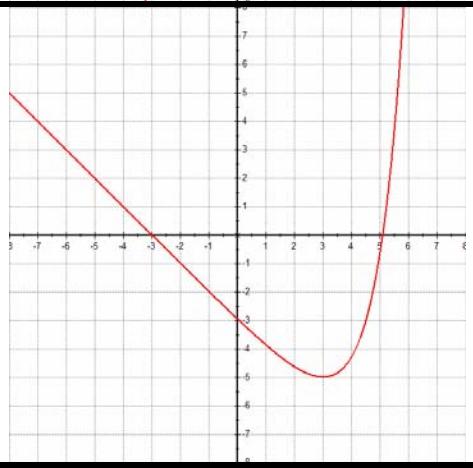
$$f(x) = -3x + 2$$
$$f'(x) = -3$$



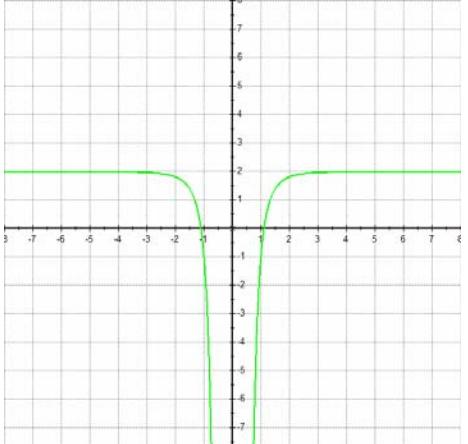
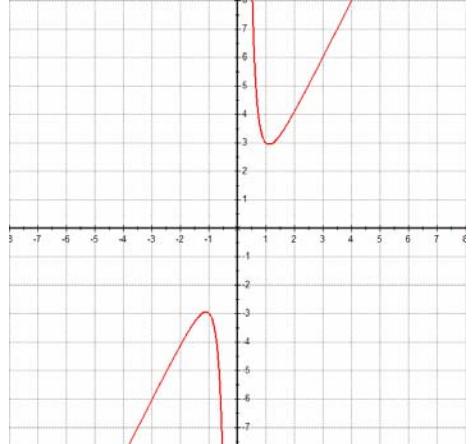
$$f(x) = \frac{1}{12}x^4 - \frac{1}{2}x^2 + 4$$
$$f'(x) = \frac{1}{3}x^3 - x$$



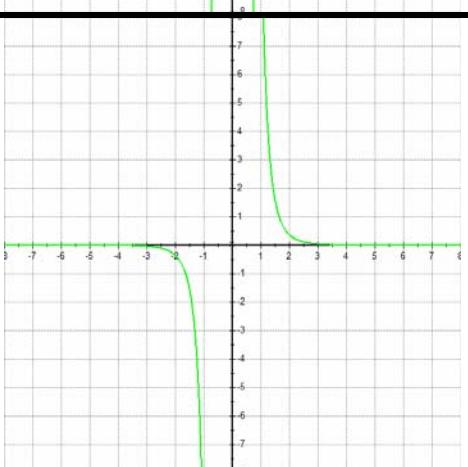
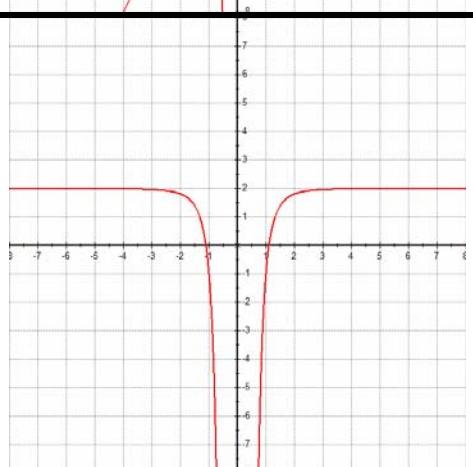
$$f(x) = \frac{1}{3}x^3 - x$$
$$f'(x) = x^2 - 1$$



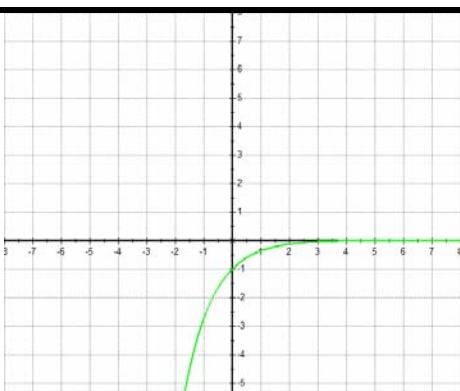
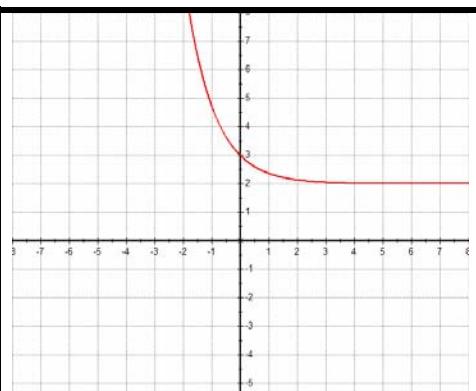
$$f(x) = e^{x-3} - x - 3$$
$$f'(x) = e^{x-3} - 1$$



$$f(x) = \frac{1}{x^3} + 2x$$
$$f'(x) = -\frac{3}{x^2} + 2$$

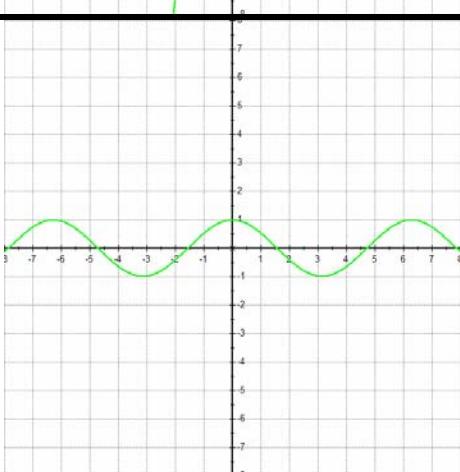
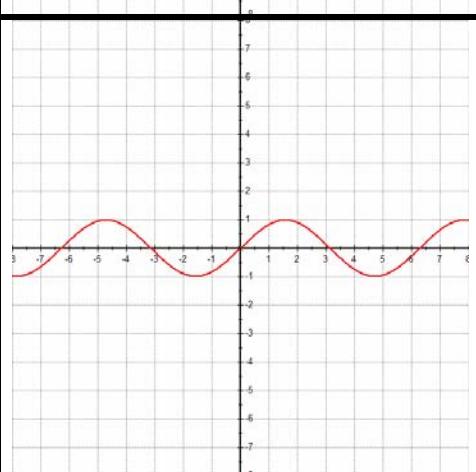


$$f(x) = -\frac{3}{x^2} + 2$$
$$f'(x) = \frac{6}{x}$$



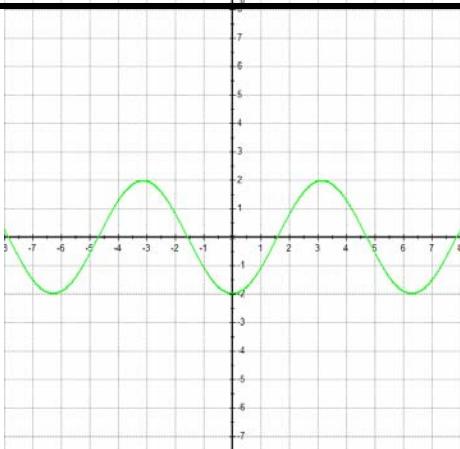
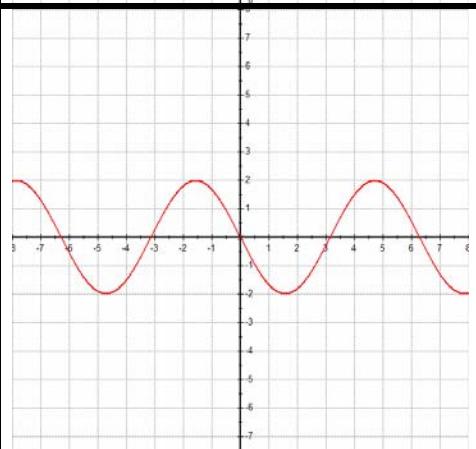
$$f(x) = e^{-x} + 2$$

$$f'(x) = -e^{-x}$$



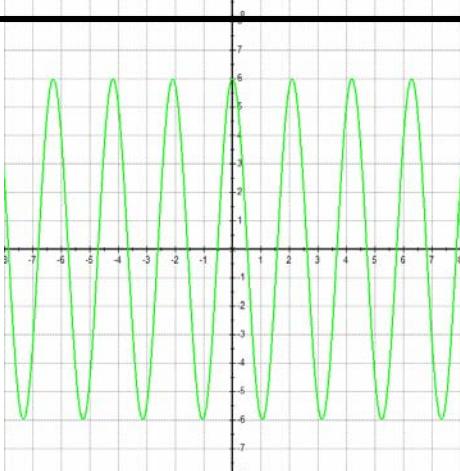
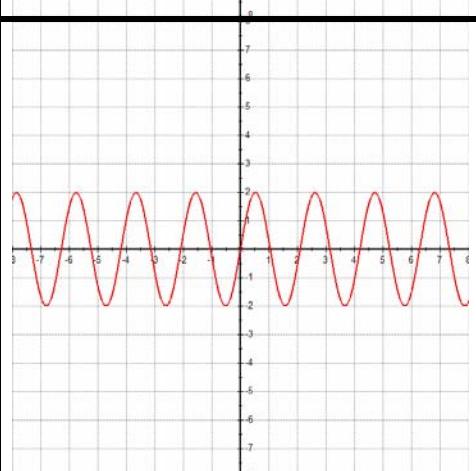
$$f(x) = \sin(x)$$

$$f'(x) = \cos(x)$$



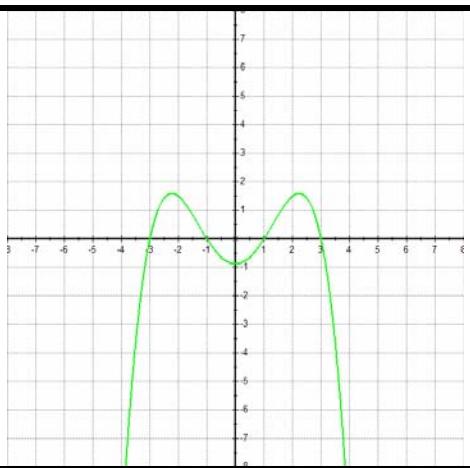
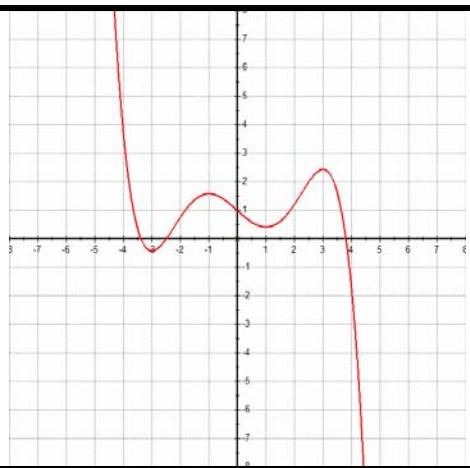
$$f(x) = -2 \cdot \sin(x)$$

$$f'(x) = -2 \cdot \cos(x)$$

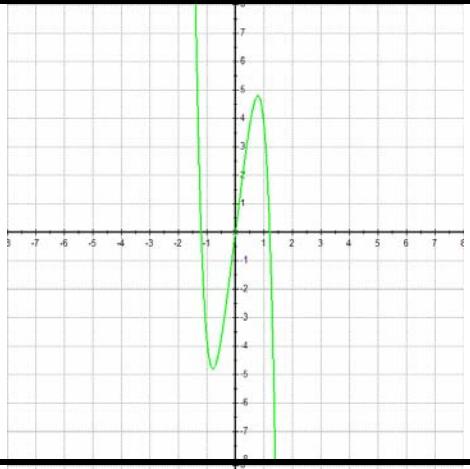
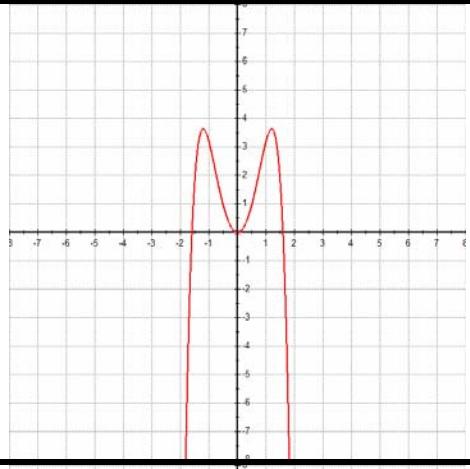


$$f(x) = 2 \cdot \sin(3x)$$

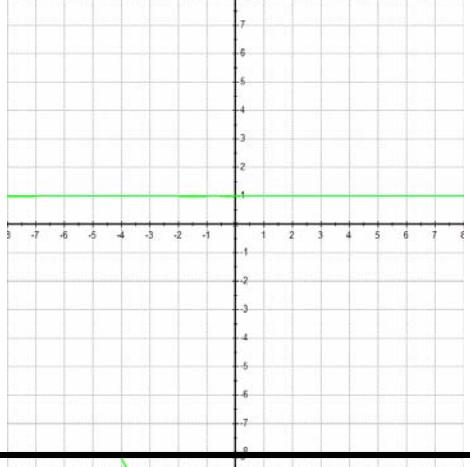
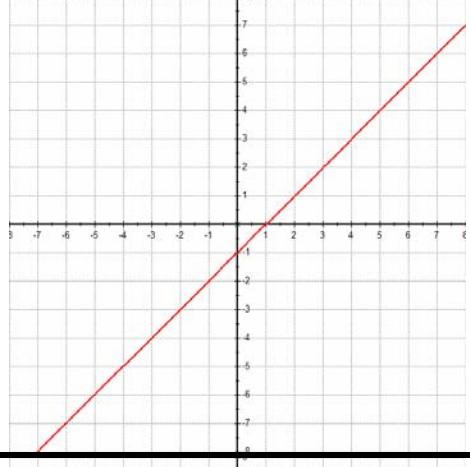
$$f'(x) = 6 \cdot \cos(3x)$$



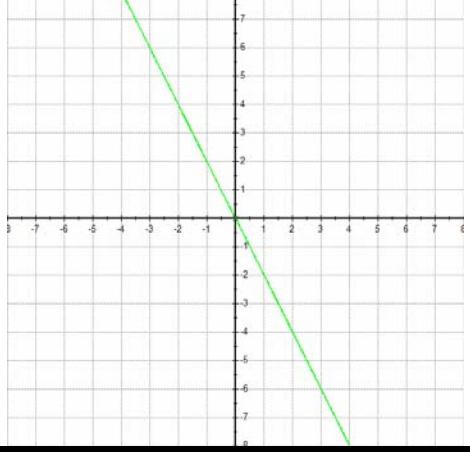
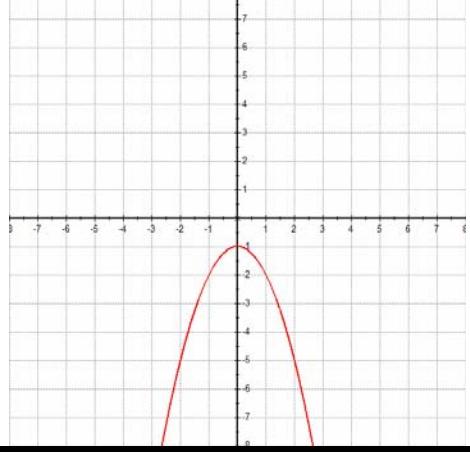
$$f(x) = -\frac{1}{50}x^5 + \frac{1}{3}x^3 - \frac{9}{10}x + 1$$
$$f'(x) = -\frac{1}{10}x^4 + x^2 - \frac{9}{10}$$



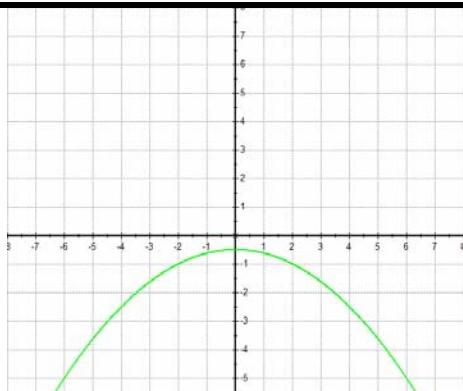
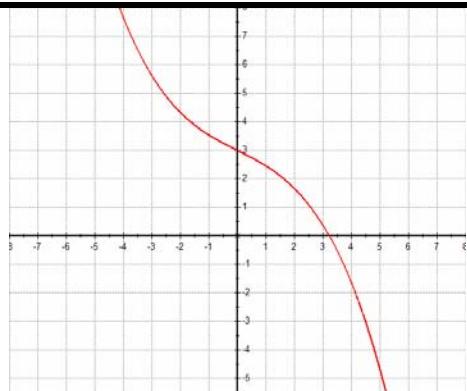
$$f(x) = -\frac{1}{2}x^6 - \frac{3}{10}x^4 + 4x^2$$
$$f'(x) = -3x^5 - \frac{6}{5}x^3 + 8x$$



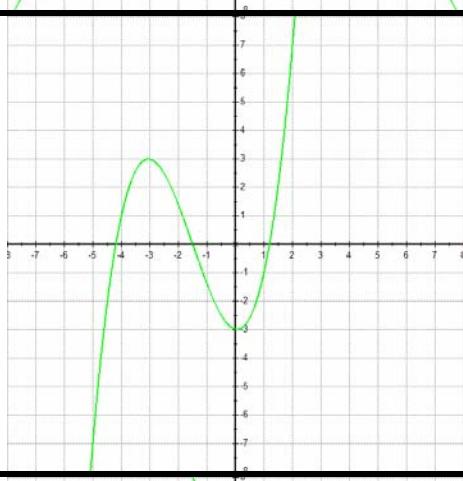
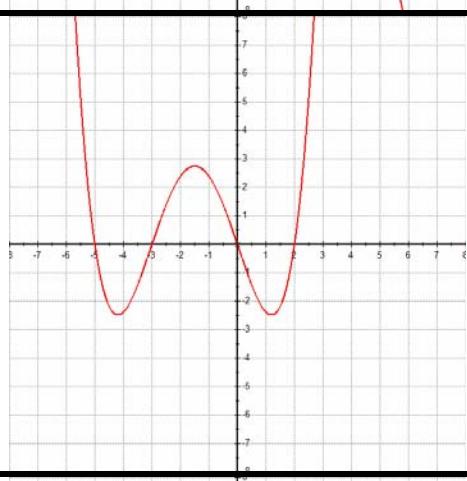
$$f(x) = x - 1$$
$$f'(x) = 1$$



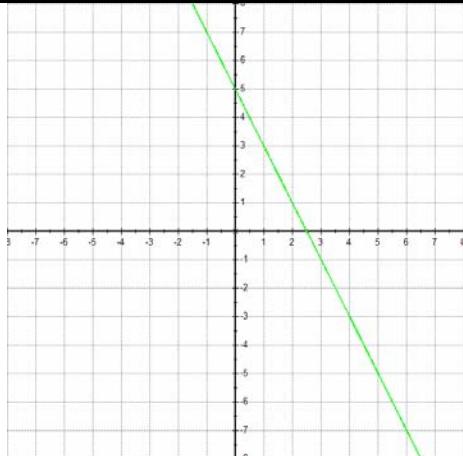
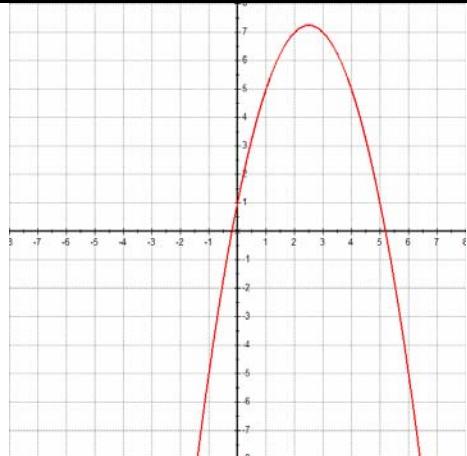
$$f(x) = -x^2 - 1$$
$$f'(x) = -2x$$



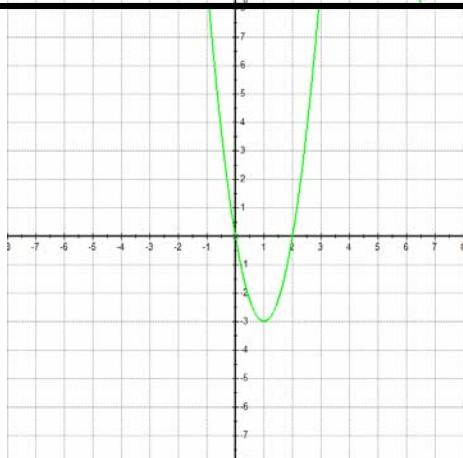
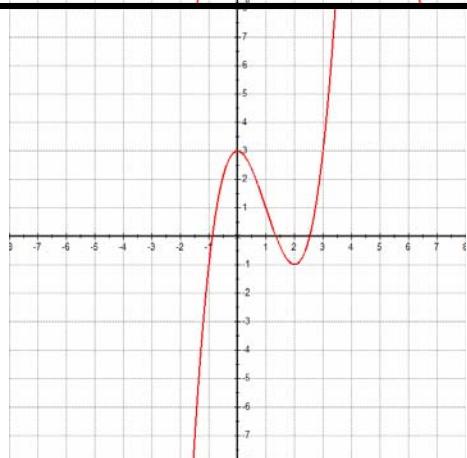
$$f(x) = -\frac{1}{24}x^3 - \frac{1}{2}x + 3$$
$$f'(x) = -\frac{1}{8}x^2 - \frac{1}{2}$$



$$f(x) = x^4 + 6x^3 - x^2 - 30x$$
$$f'(x) = 4x^3 + 18x^2 - 2x - 30$$



$$f(x) = -x^2 + 5x + 1$$
$$f'(x) = -2x + 5$$



$$f(x) = x^3 - 3x^2 + 3$$
$$f'(x) = 3x^2 - 6x$$

$$\begin{array}{ll} f(x) = x^2 & f(x) = x^2 \\ f'(x) = 2x & f'(x) = 2x \end{array}$$

$$\begin{array}{ll} f(x) = x^3 & f(x) = x^3 \\ f'(x) = 3x^2 & f'(x) = 3x^2 \end{array}$$

$$\begin{array}{ll} f(x) = x^4 & f(x) = x^4 \\ f'(x) = 4x^3 & f'(x) = 4x^3 \end{array}$$

$$\begin{array}{ll} f(x) = x^5 & f(x) = x^5 \\ f'(x) = 5x^4 & f'(x) = 5x^4 \end{array}$$

$$\begin{array}{ll} f(x) = -x^2 & f(x) = -x^2 \\ f'(x) = -2x & f'(x) = -2x \end{array}$$

$$\begin{array}{ll} f(x) = -\frac{1}{2}x^2 + 2 & f(x) = -\frac{1}{2}x^2 + 2 \\ f'(x) = -x & f'(x) = -x \end{array}$$

$$\begin{array}{ll} f(x) = 3x^2 - 3 & f(x) = 3x^2 - 3 \\ f'(x) = 6x & f'(x) = 6x \end{array}$$

$$\begin{array}{ll} f(x) = \frac{1}{3}x^3 + x^2 & f(x) = \frac{1}{3}x^3 + x^2 \\ f'(x) = x^2 + 2x & f'(x) = x^2 + 2x \end{array}$$

$$f(x) = -\frac{1}{2}x^2 - x + 2$$

$$f'(x) = -x - 1$$

$$f(x) = -\frac{1}{2}x^2 - x + 2$$

$$f'(x) = -x - 1$$

$$f(x) = -\frac{3}{2}x^2 + 2x + 1$$

$$f'(x) = -3x + 2$$

$$f(x) = -\frac{3}{2}x^2 + 2x + 1$$

$$f'(x) = -3x + 2$$

$$f(x) = -3x + 2$$

$$f'(x) = -3$$

$$f(x) = -3x + 2$$

$$f'(x) = -3$$

$$f(x) = \frac{1}{12}x^4 - \frac{1}{2}x^2 + 4$$

$$f'(x) = \frac{1}{3}x^3 - x$$

$$f(x) = \frac{1}{12}x^4 - \frac{1}{2}x^2 + 4$$

$$f'(x) = \frac{1}{3}x^3 - x$$

$$\begin{aligned}f(x) &= \frac{1}{3}x^3 - x \\f'(x) &= x^2 - 1\end{aligned}\qquad\qquad\begin{aligned}f(x) &= \frac{1}{3}x^3 - x \\f'(x) &= x^2 - 1\end{aligned}$$

$$\begin{aligned}f(x) &= e^{x-3} - x - 3 \\f'(x) &= e^{x-3} - 1\end{aligned}\qquad\qquad\begin{aligned}f(x) &= e^{x-3} - x - 3 \\f'(x) &= e^{x-3} - 1\end{aligned}$$

$$\begin{aligned}f(x) &= \frac{1}{x^3} + 2x \\f'(x) &= -\frac{3}{x^2} + 2\end{aligned}\qquad\qquad\begin{aligned}f(x) &= \frac{1}{x^3} + 2x \\f'(x) &= -\frac{3}{x^2} + 2\end{aligned}$$

$$\begin{aligned}f(x) &= -\frac{3}{x^2} + 2 \\f'(x) &= \frac{6}{x}\end{aligned}\qquad\qquad\begin{aligned}f(x) &= -\frac{3}{x^2} + 2 \\f'(x) &= \frac{6}{x}\end{aligned}$$

$$\begin{aligned}f(x) &= e^{-x} + 2 \\f'(x) &= -e^{-x}\end{aligned}$$

$$\begin{aligned}f(x) &= e^{-x} + 2 \\f'(x) &= -e^{-x}\end{aligned}$$

$$\begin{aligned}f(x) &= \sin(x) \\f'(x) &= \cos(x)\end{aligned}$$

$$\begin{aligned}f(x) &= \sin(x) \\f'(x) &= \cos(x)\end{aligned}$$

$$\begin{aligned}f(x) &= -2 \cdot \sin(x) \\f'(x) &= -2 \cdot \cos(x)\end{aligned}$$

$$\begin{aligned}f(x) &= -2 \cdot \sin(x) \\f'(x) &= -2 \cdot \cos(x)\end{aligned}$$

$$\begin{aligned}f(x) &= 2 \cdot \sin(3x) \\f'(x) &= 6 \cdot \cos(3x)\end{aligned}$$

$$\begin{aligned}f(x) &= 2 \cdot \sin(3x) \\f'(x) &= 6 \cdot \cos(3x)\end{aligned}$$

$$\begin{array}{ll} f(x) = -\frac{1}{50}x^5 + \frac{1}{3}x^3 - \frac{9}{10}x + 1 & f(x) = -\frac{1}{50}x^5 + \frac{1}{3}x^3 - \frac{9}{10}x + 1 \\ f'(x) = -\frac{1}{10}x^4 + x^2 - \frac{9}{10} & f'(x) = -\frac{1}{10}x^4 + x^2 - \frac{9}{10} \end{array}$$

$$\begin{array}{ll} f(x) = -\frac{1}{2}x^6 - \frac{3}{10}x^4 + 4x^2 & f(x) = -\frac{1}{2}x^6 - \frac{3}{10}x^4 + 4x^2 \\ f'(x) = -3x^5 - \frac{6}{5}x^3 + 8x & f'(x) = -3x^5 - \frac{6}{5}x^3 + 8x \end{array}$$

$$\begin{array}{ll} f(x) = x - 1 & f(x) = x - 1 \\ f'(x) = 1 & f'(x) = 1 \end{array}$$

$$\begin{array}{ll} f(x) = -x^2 - 1 & f(x) = -x^2 - 1 \\ f'(x) = -2x & f'(x) = -2x \end{array}$$

$$f(x) = -\frac{1}{24}x^3 - \frac{1}{2}x + 3$$
$$f'(x) = -\frac{1}{8}x^2 - \frac{1}{2}$$

$$f(x) = -\frac{1}{24}x^3 - \frac{1}{2}x + 3$$
$$f'(x) = -\frac{1}{8}x^2 - \frac{1}{2}$$

$$f(x) = x^4 + 6x^3 - x^2 - 30x$$
$$f'(x) = 4x^3 + 18x^2 - 2x - 30$$

$$f(x) = x^4 + 6x^3 - x^2 - 30x$$
$$f'(x) = 4x^3 + 18x^2 - 2x - 30$$

$$f(x) = -x^2 + 5x + 1$$
$$f'(x) = -2x + 5$$

$$f(x) = -x^2 + 5x + 1$$
$$f'(x) = -2x + 5$$

$$f(x) = x^3 - 3x^2 + 3$$
$$f'(x) = 3x^2 - 6x$$

$$f(x) = x^3 - 3x^2 + 3$$
$$f'(x) = 3x^2 - 6x$$