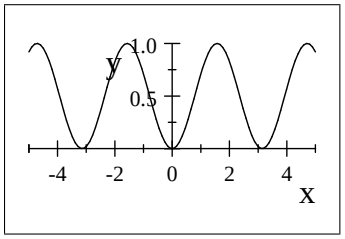
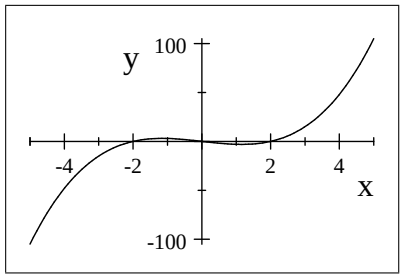
24

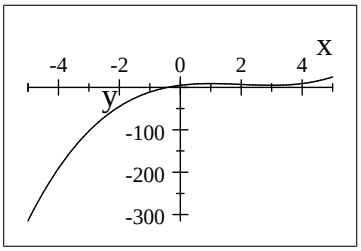
(1) $\sin^2 x$



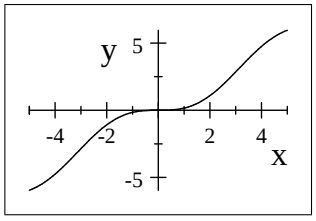
(2) $x\,(x^2-4)$



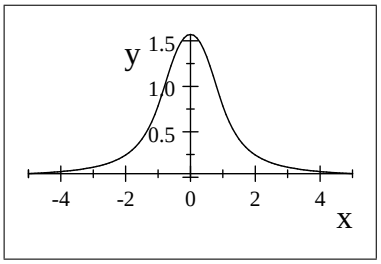
(3) $x^2\,(x-6)+9x+5$



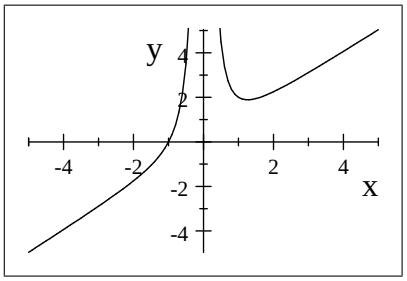
(4) $x-\sin x$



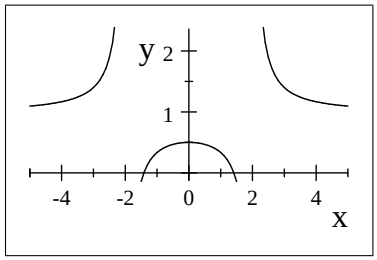
(5) $\arctan\dfrac{1}{x^2}$



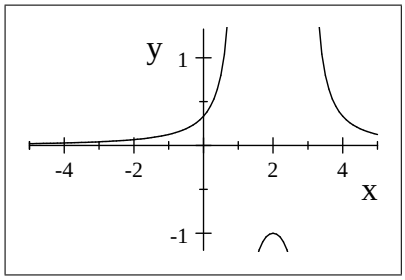
(6) $\dfrac{x^3+1}{x^2}$



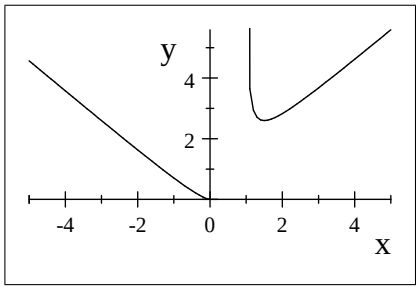
(7) $\frac{x^2-2}{x^2-4}$



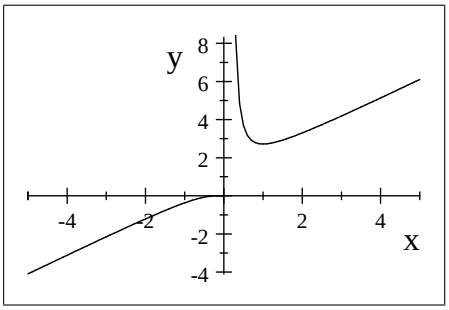
(8) $\dfrac{1}{(x-1)(x-3)}$



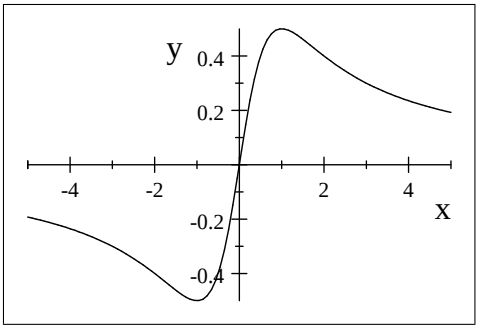
(9) $\sqrt{\dfrac{x^3}{x-1}}$



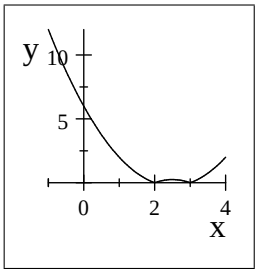
(10) $xe^{1/x}$



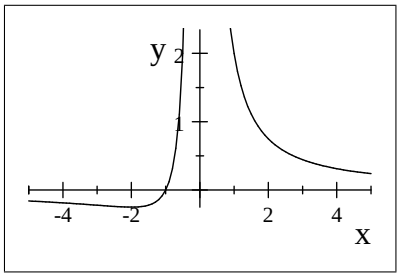
(11) $\dfrac{x}{1+x^2}$



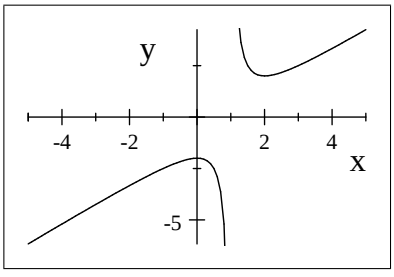
(12) $|x^2 - 5x + 6|$



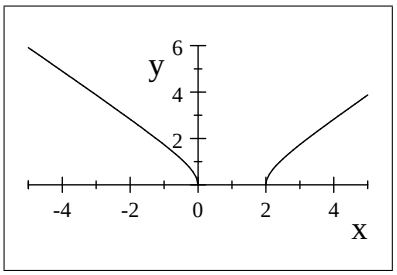
(13) $\dfrac{1}{x} + \dfrac{1}{x^2}$



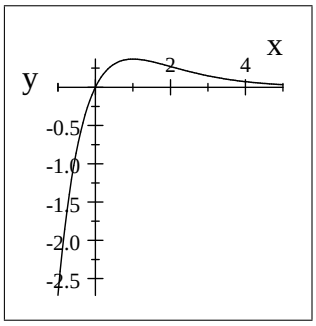
(14) $\dfrac{x^2 - 2x + 2}{x - 1}$



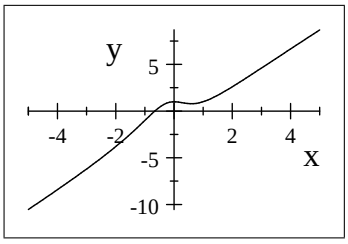
(15) $\sqrt{x\,(x-2)}$



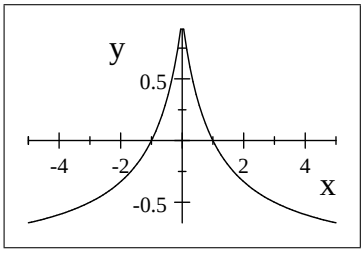
(16) xe^{-x}



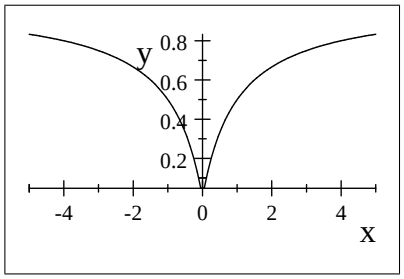
(17) $\dfrac{2x^3 - x^2 + 1}{x^2 + 1}$



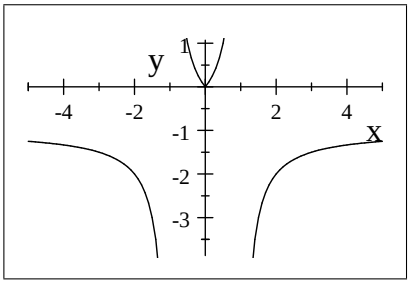
(18) $\dfrac{1 - |x|}{1 + |x|}$



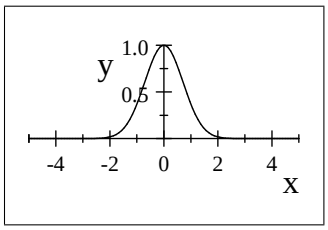
(19) $\dfrac{|x|}{1 + |x|}$



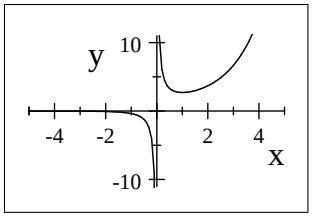
(20) $\dfrac{|x|}{1-|x|}$



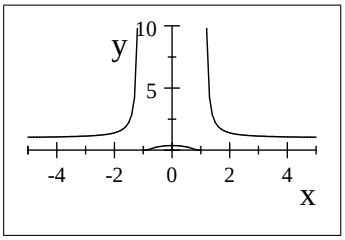
(21) e^{-x^2}



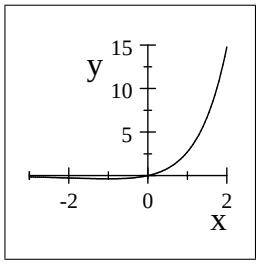
(22) $\dfrac{e^x}{x}$



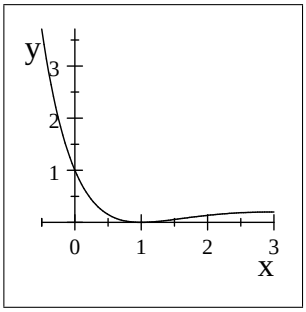
(23) $e^{1/\left(x^2-1\right)}$



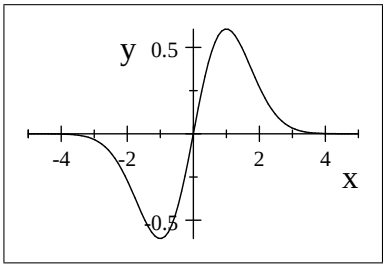
(24) xe^x



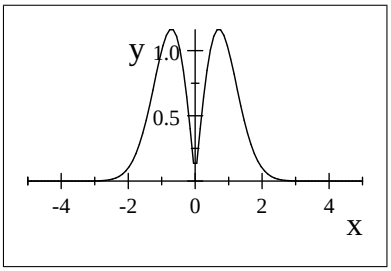
(25) $(x-1)^2 e^{-x}$



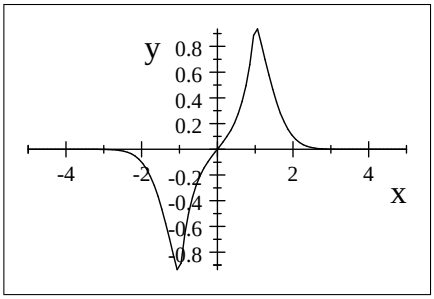
(26) $xe^{-x^2/2}$



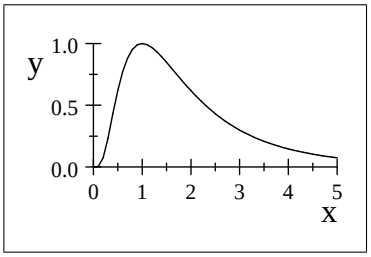
(27) $|x|\, e^{1-x^2}$



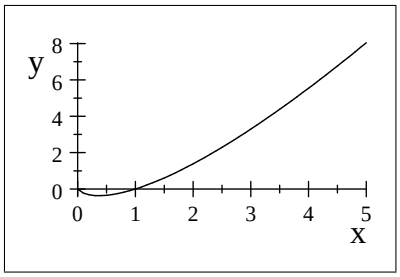
(28) $xe^{-|1-x^2|}$



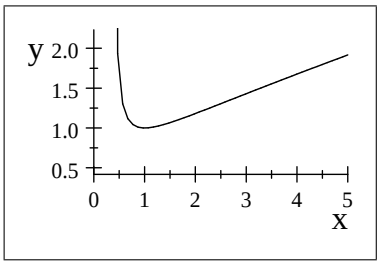
(29) $e^{-\log^2 x}$



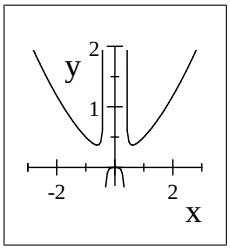
(30) $x \log x$



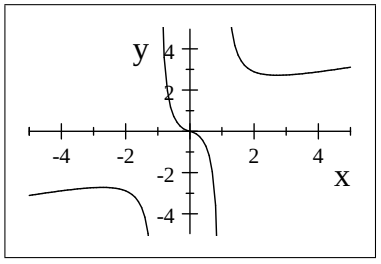
(31) $\dfrac{x}{1+\log x}$



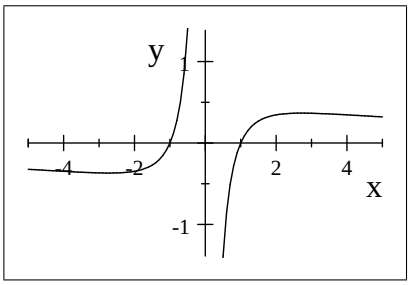
(32) $\dfrac{x^2}{2+\log x^2}$



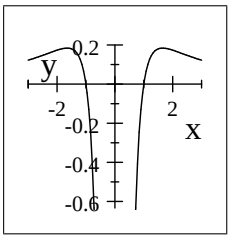
(33) $\dfrac{x}{\log |x|}$



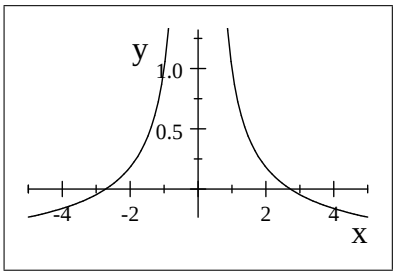
(34) $\dfrac{\log|x|}{x}$



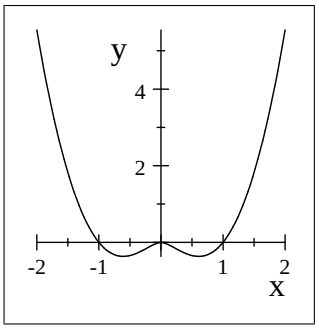
(35) $\dfrac{\log|x|}{x^2}$



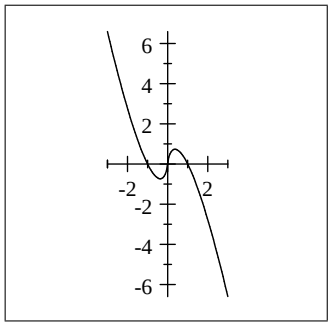
(36) $\dfrac{1-\log|x|}{1+\log|x|}$



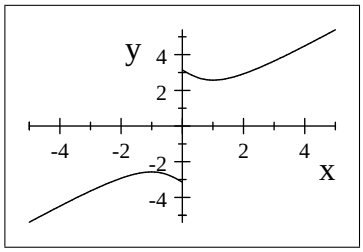
(37) $f(x) = x^2 \log x^2$, se $x \neq 0$, $f(0) = 0$.



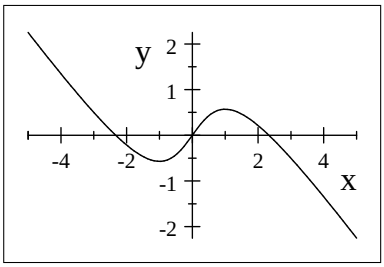
(38) $f(x) = x \log \dfrac{1}{x^2}$, se $x \neq 0$, $f(0) = 0$.



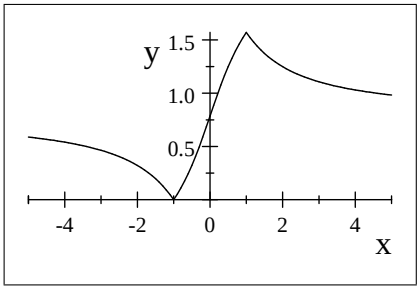
(39) $x + 2 \arctan \dfrac{1}{x}$



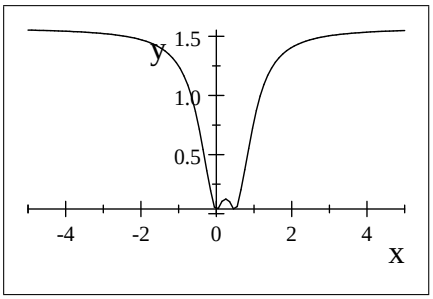
(40) $2 \arctan x - x$



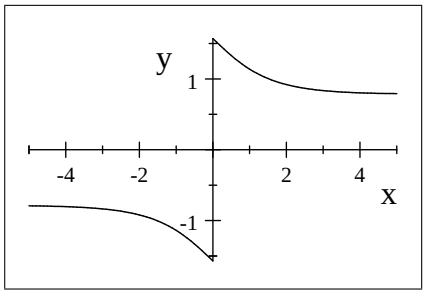
(41) $\arctan \left| \dfrac{1+x}{1-x} \right|$



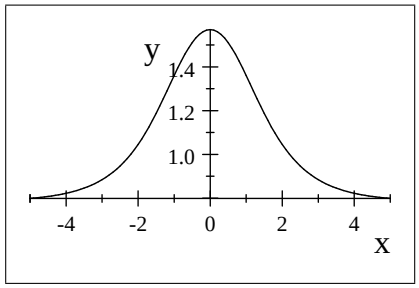
(42) $\arctan |2x^2 - x|$



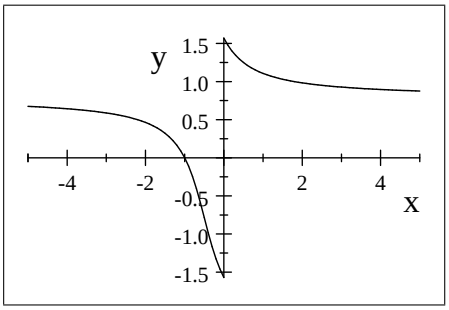
(43) $\arctan\left(\dfrac{1+e^{-x}}{1-e^{-x}}\right)$



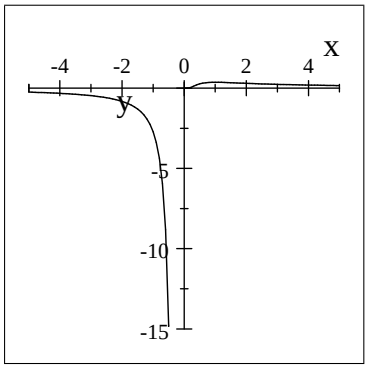
(44) $\arctan\left(\dfrac{1+e^{-x}}{1-e^{-x}}\right)^2$



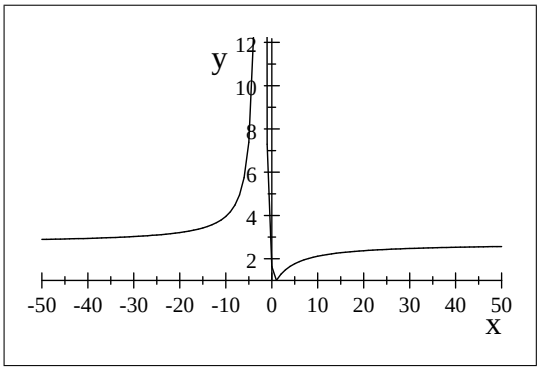
(45) $f(x) = \arctan\left(\dfrac{1+x}{x}\right)$ se $x \neq 0$, $f(0) = 0$.



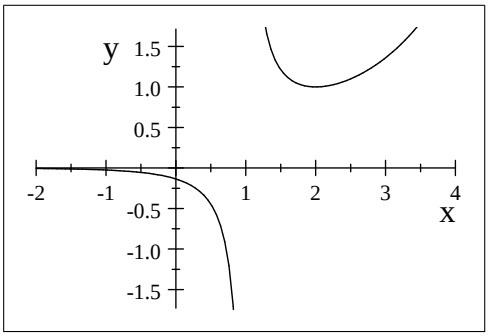
(46) $\dfrac{1}{x}e^{-\frac{1}{x}}$



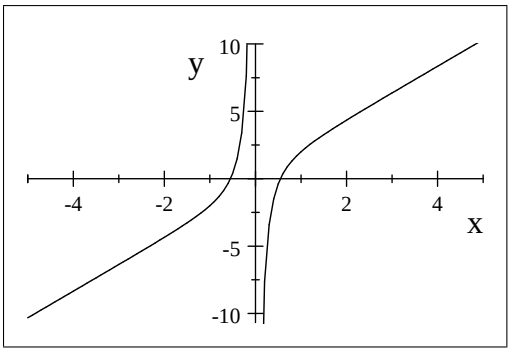
(47) $e^{\frac{|x-1|}{|x+2|}}$



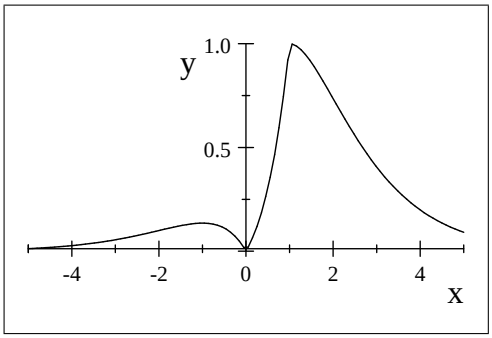
(48) $\dfrac{e^{x-2}}{x-1}$



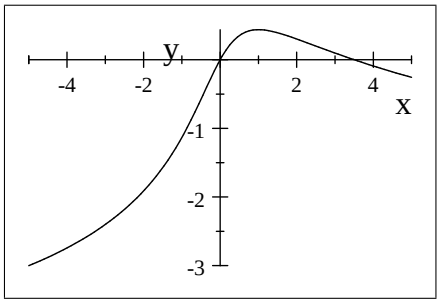
(49) $\dfrac{2x^2 + \log|x|}{x}$



(50) $|x|\, e^{-|x-1|}$



(51) $\arctan x - \log\sqrt{1+x^2}$


y
x
-4
-2
2
4
-1
-2
-3