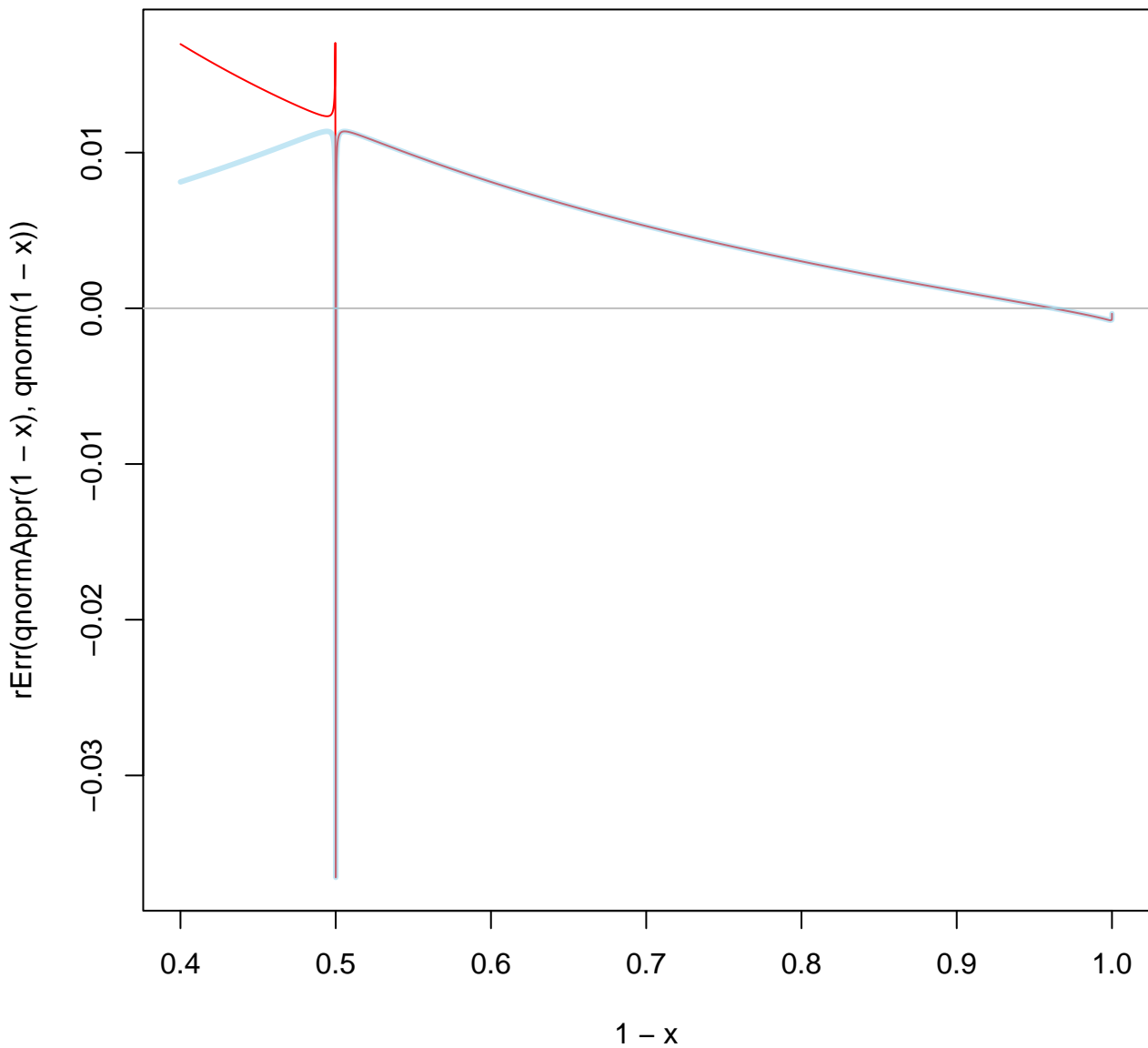
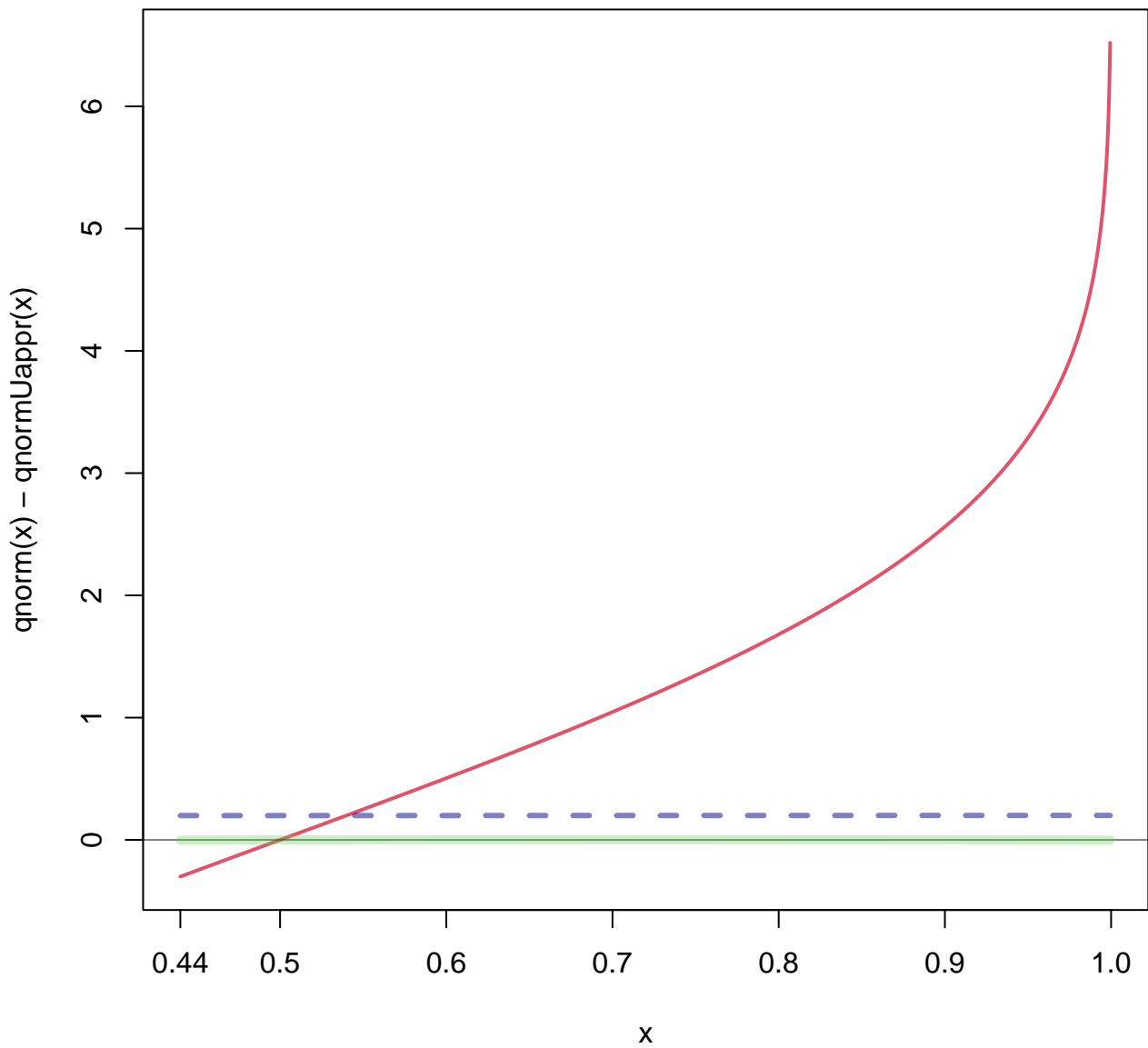
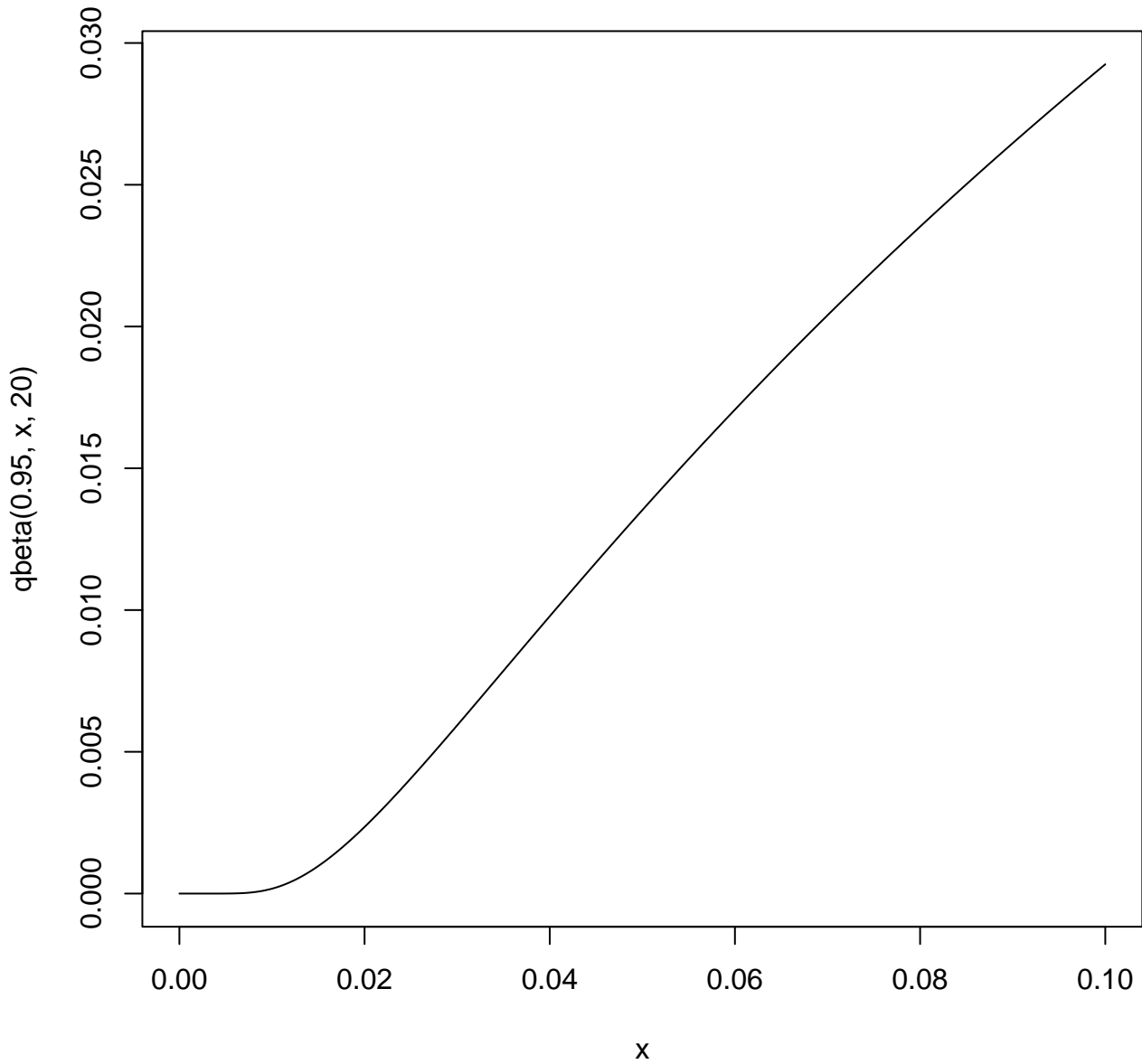
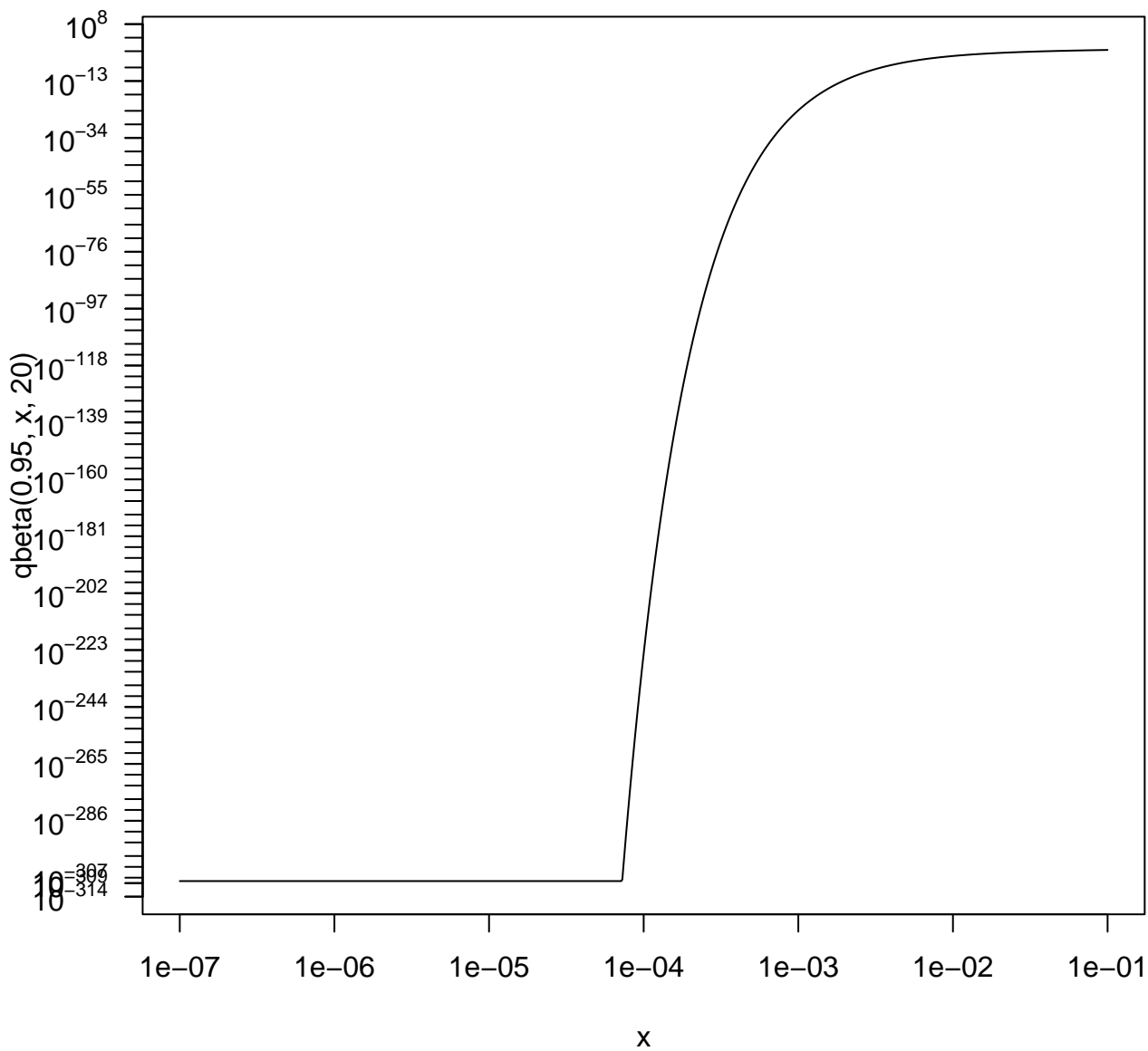


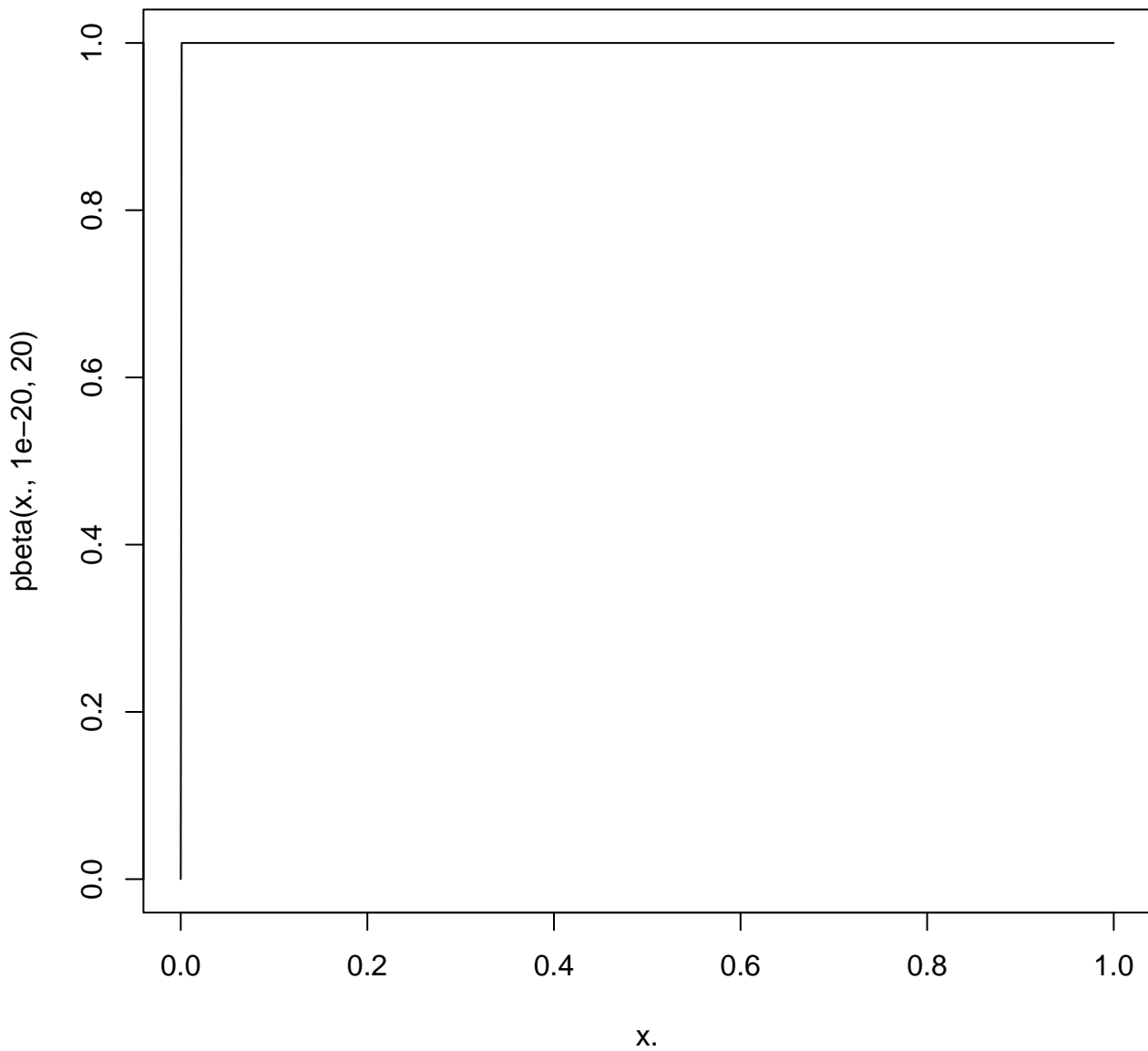
Rel. Error of 'qnormAppr(1-x)'

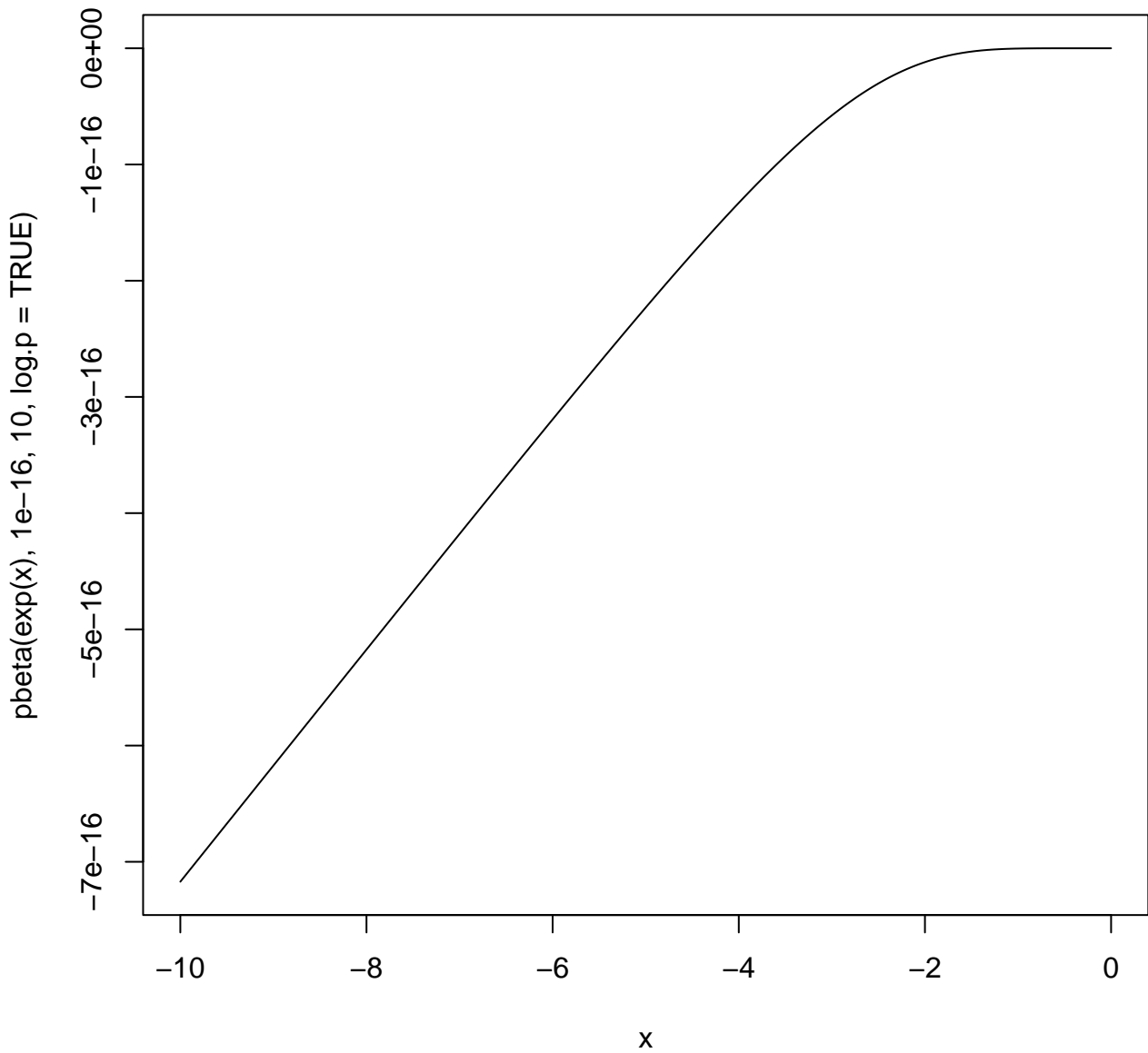


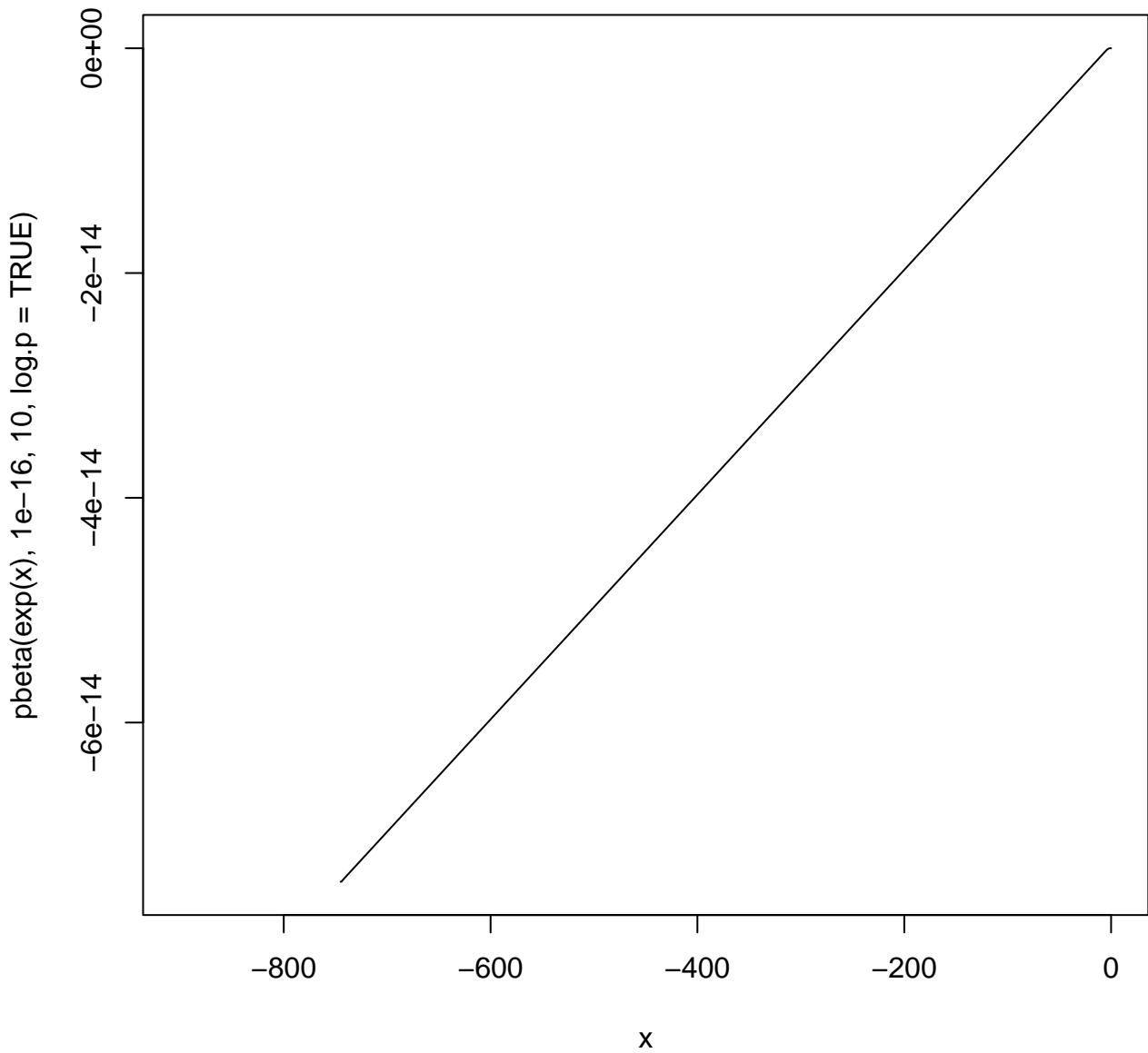




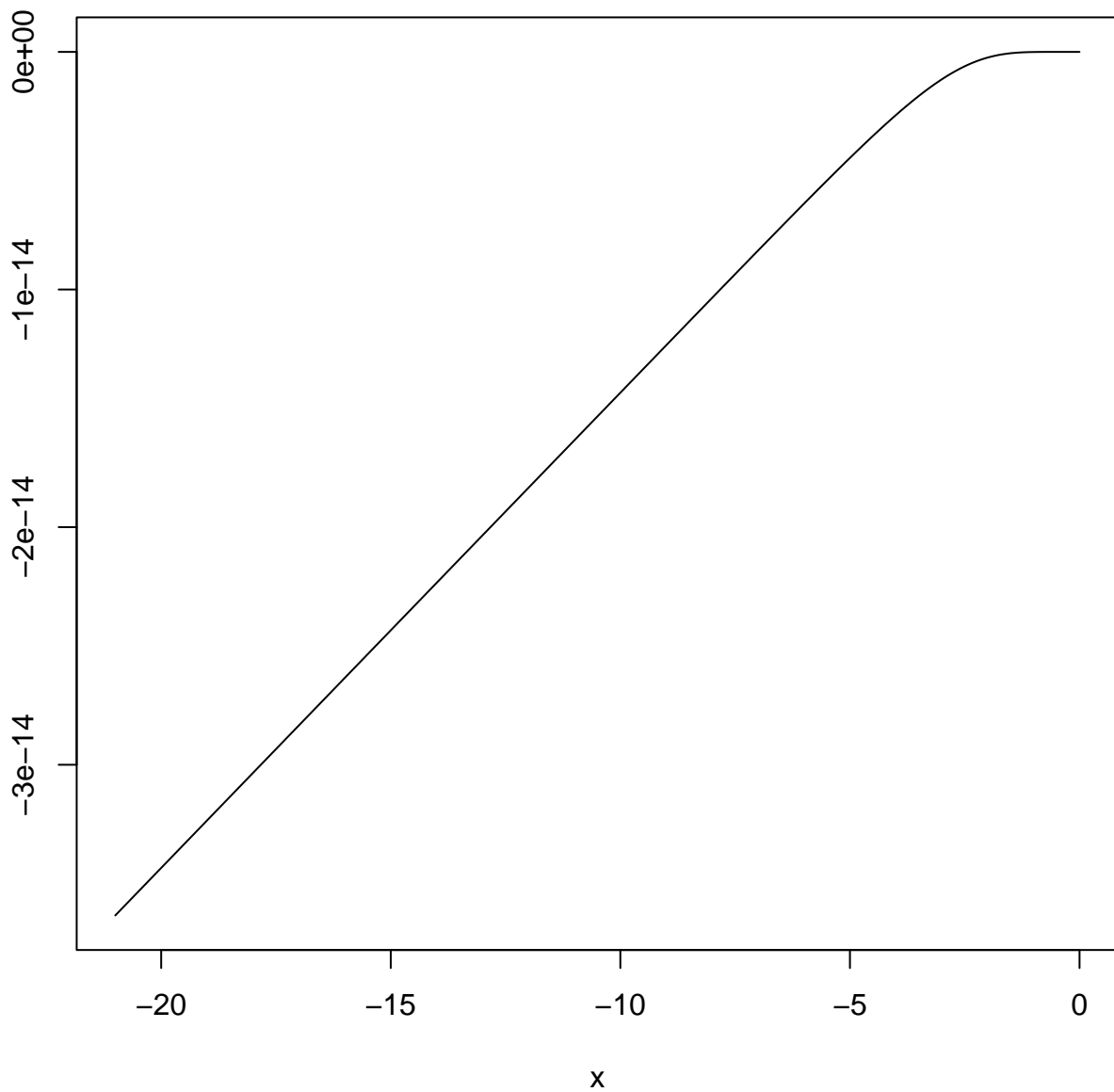




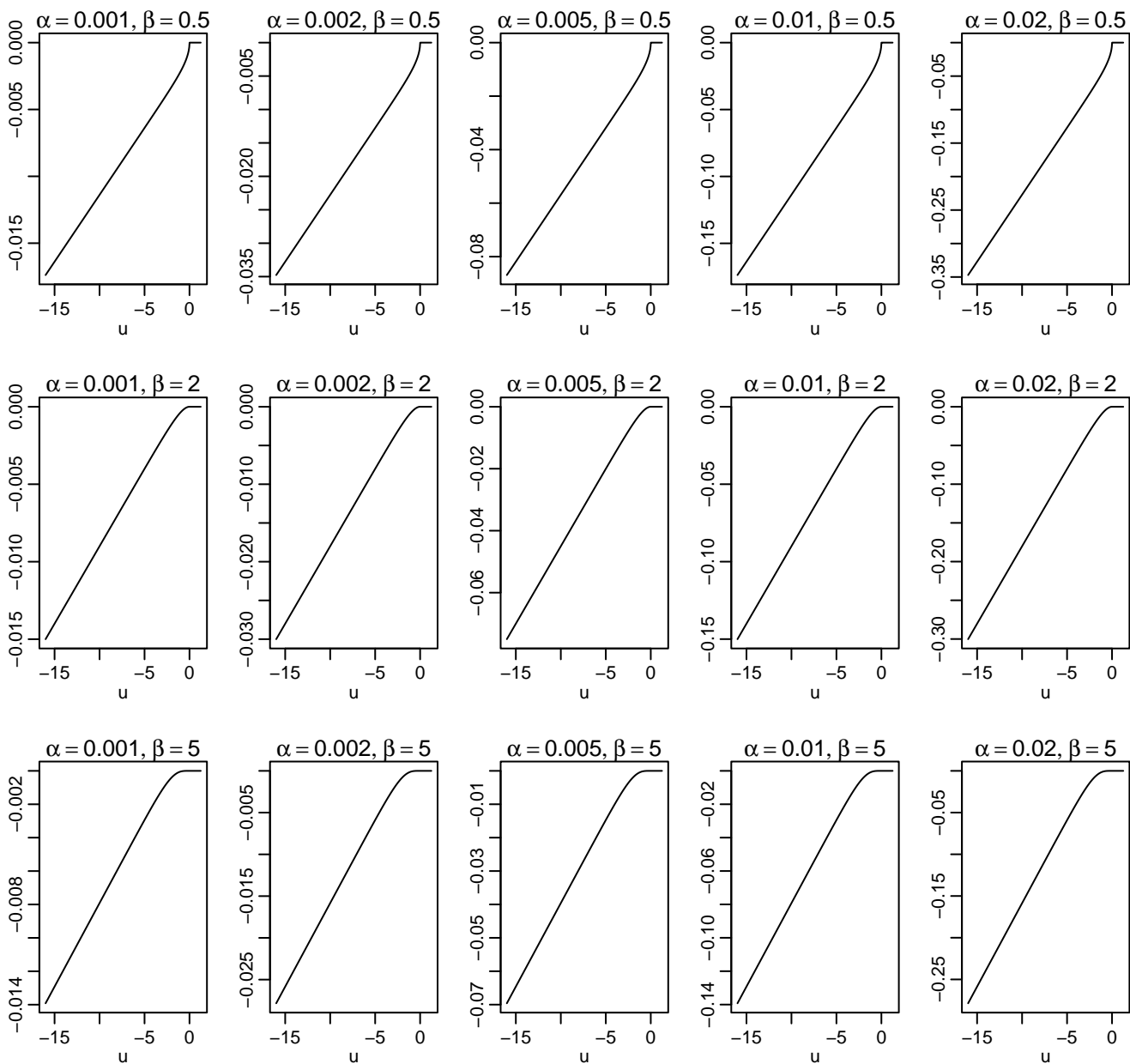


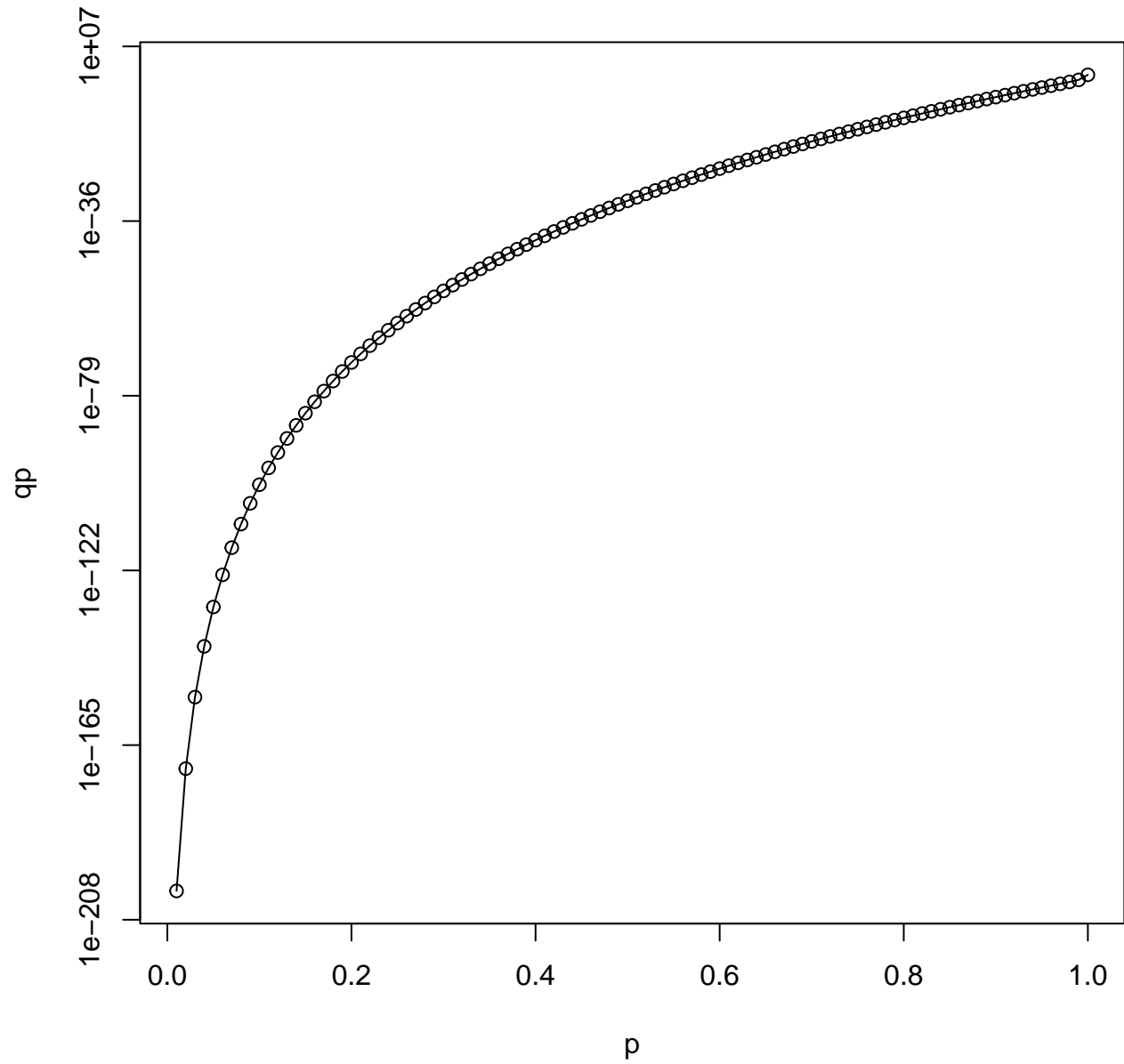


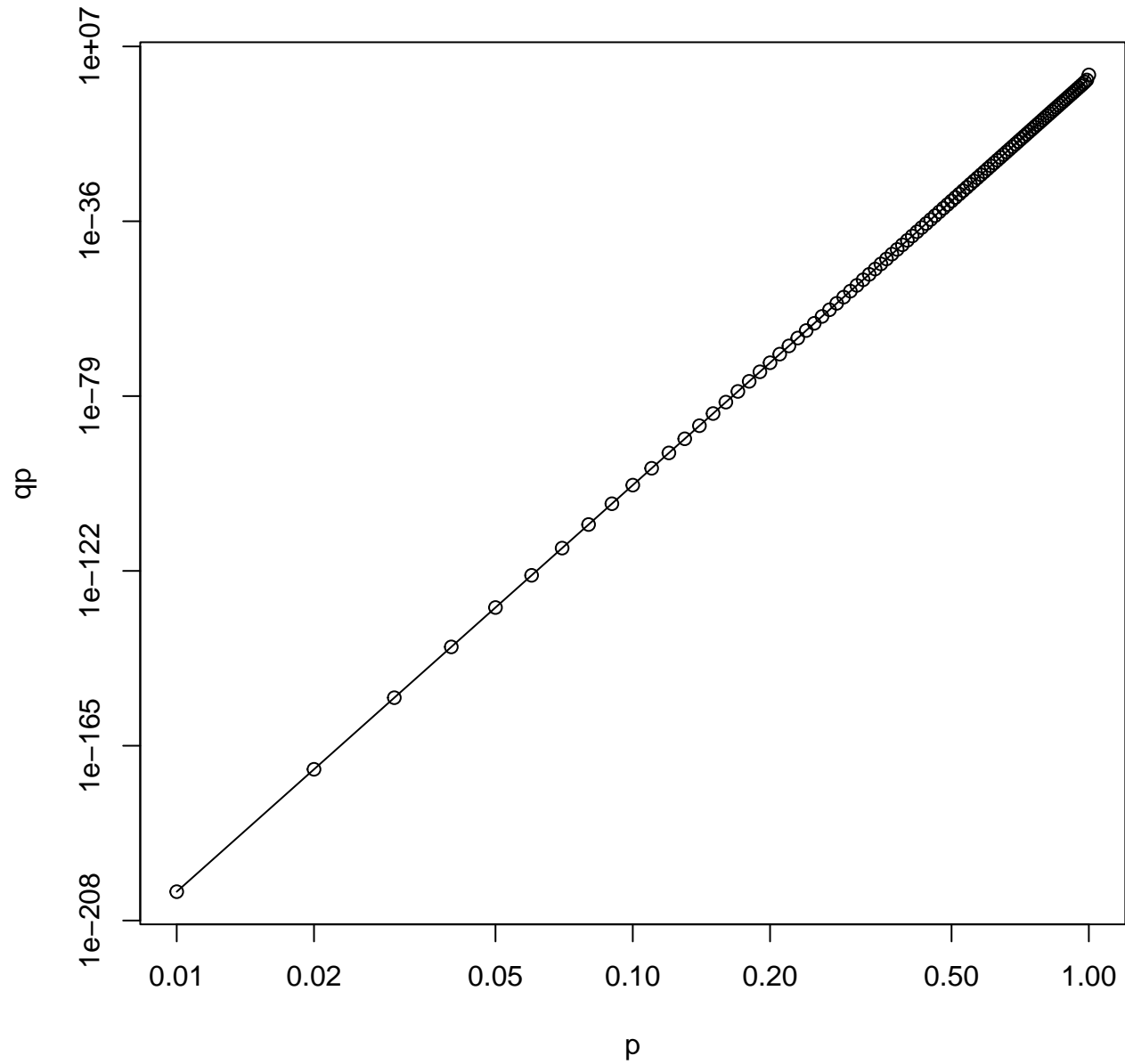
pbeta(exp(x), 2e-15, 10, log.p = TRUE)

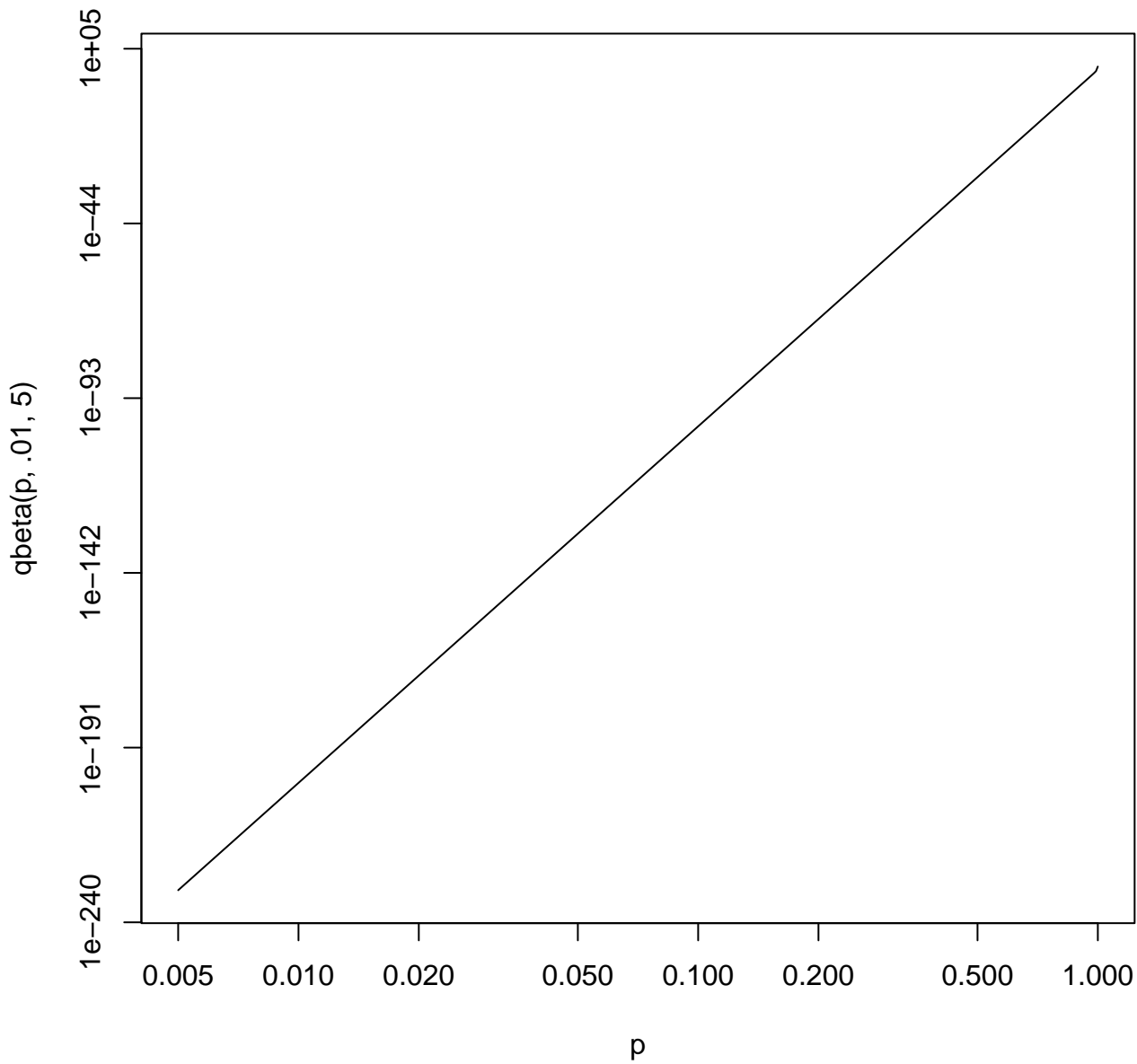


$\text{pbeta}(e^u, \alpha, \beta, \log = \text{TRUE})$

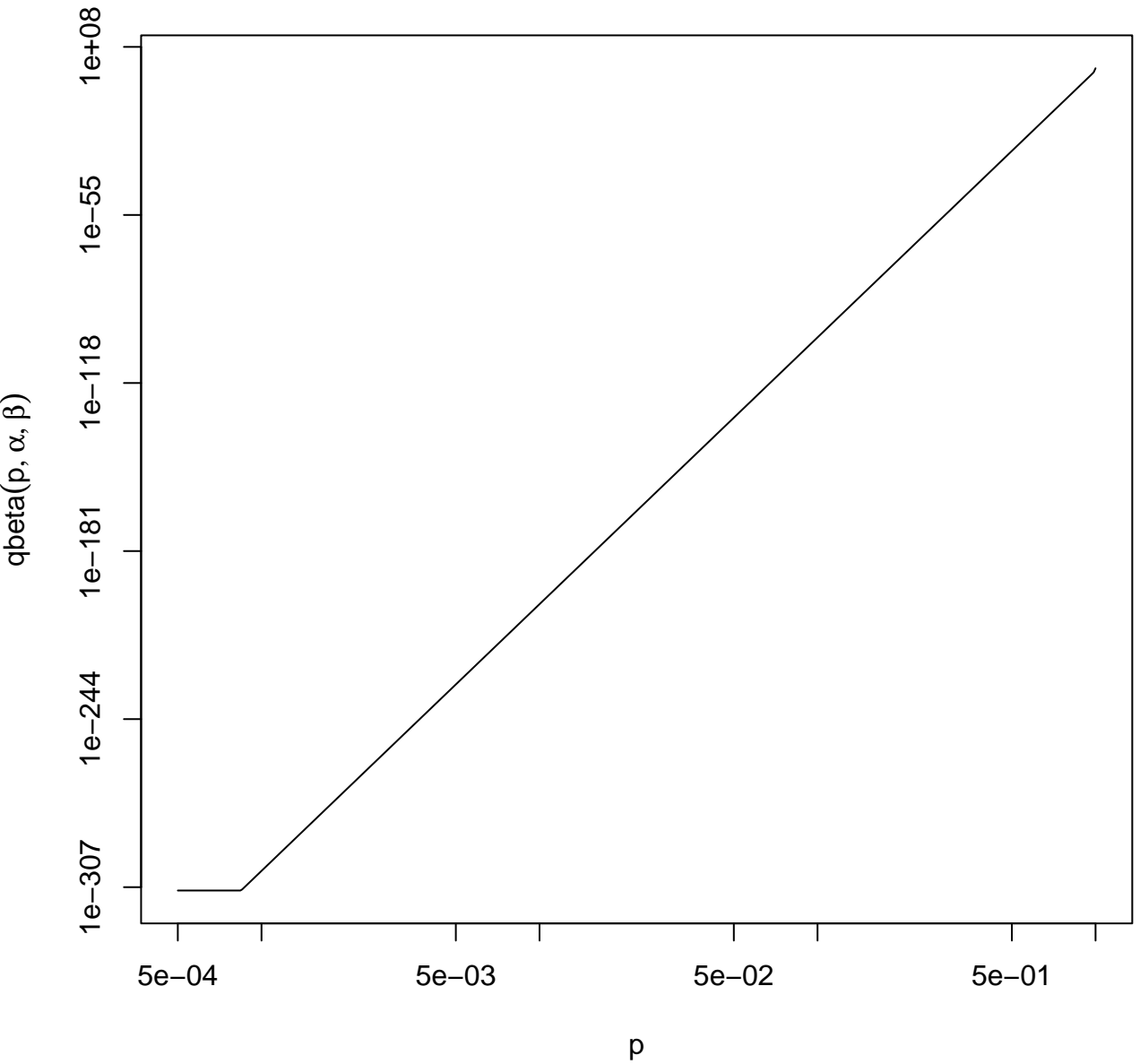




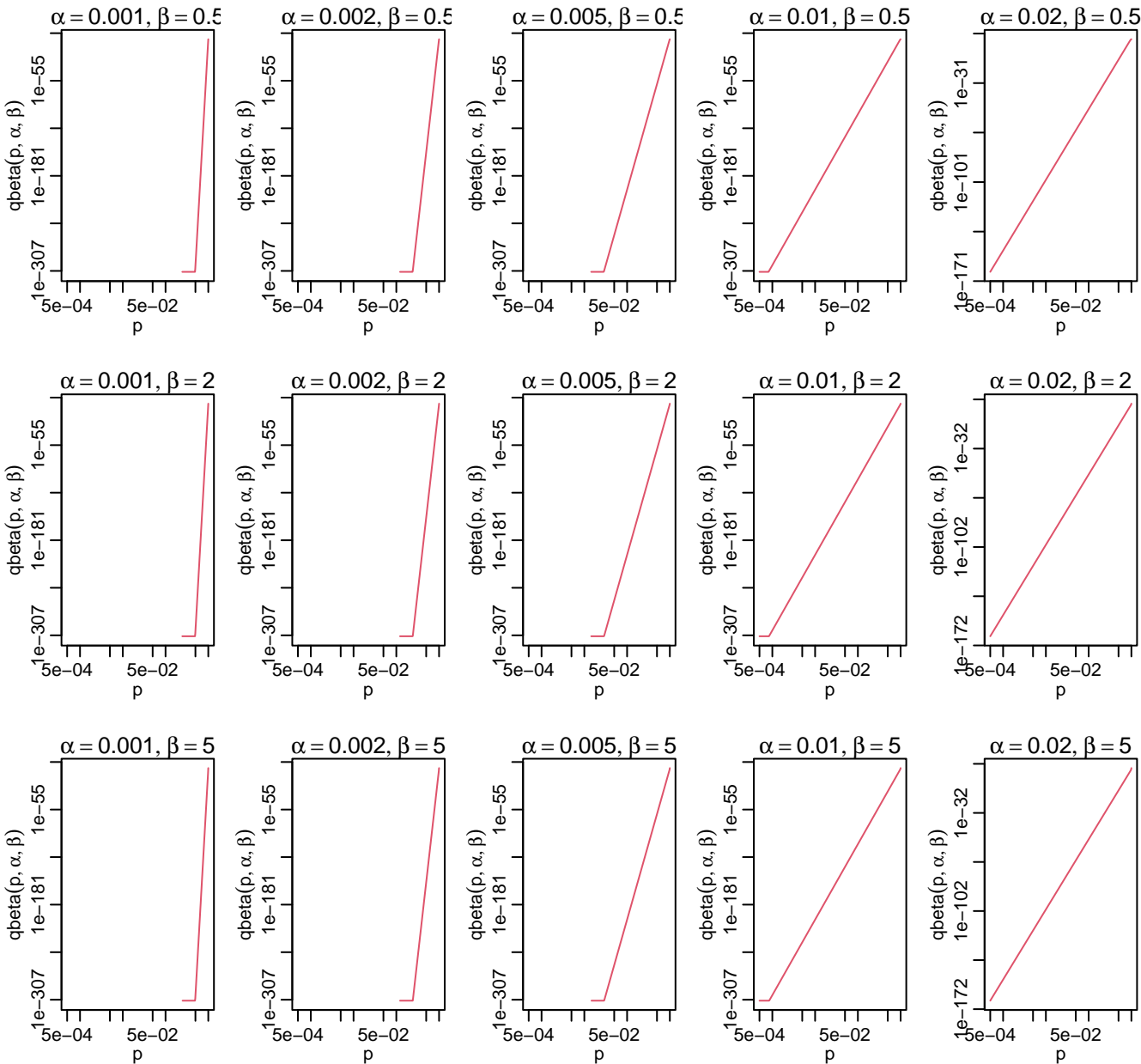




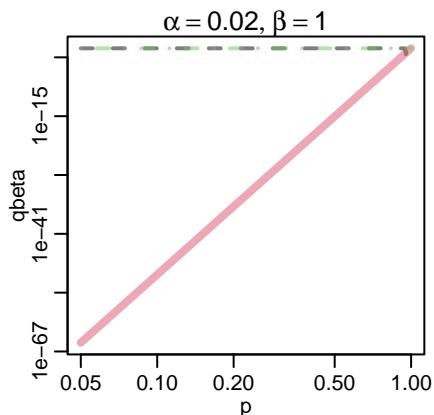
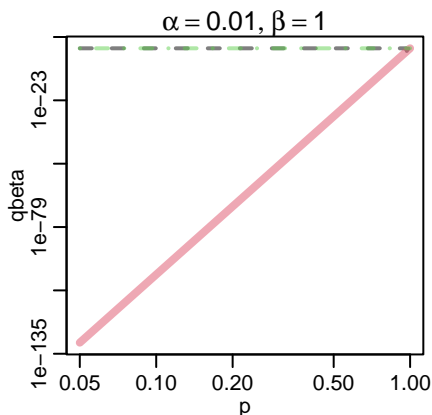
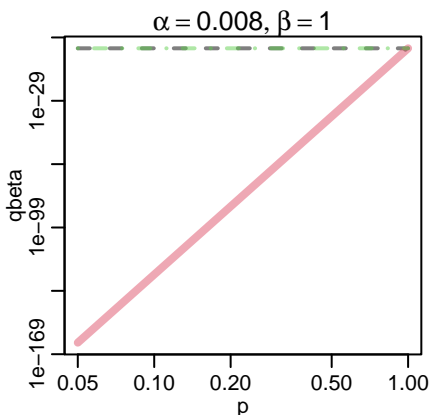
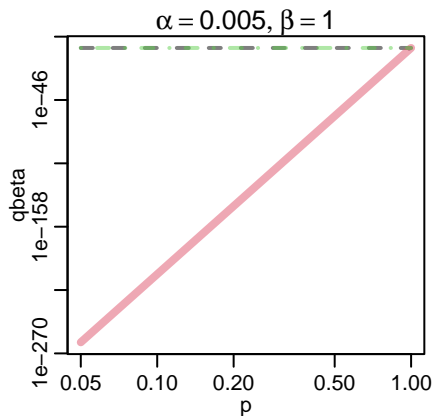
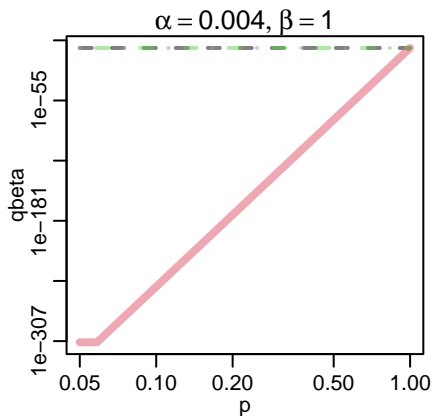
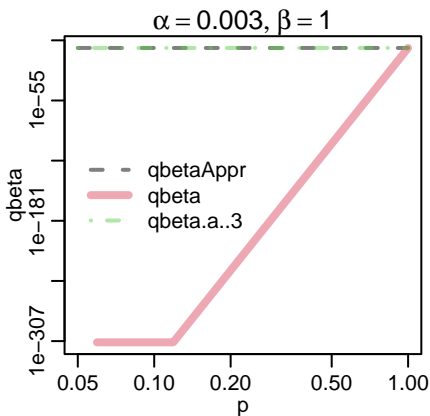
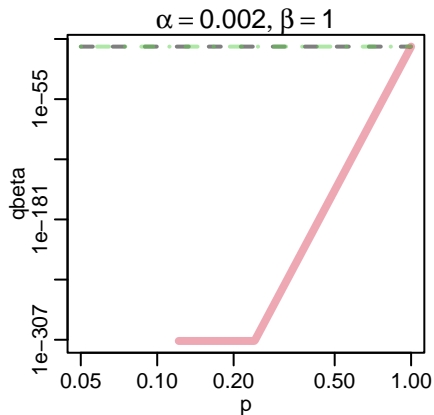
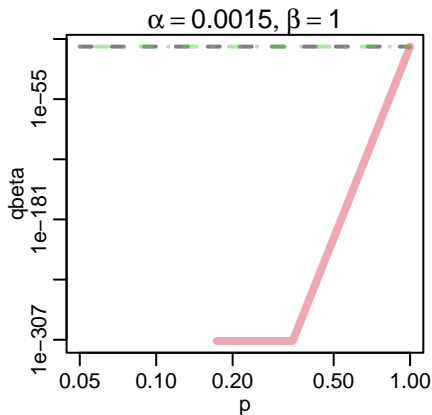
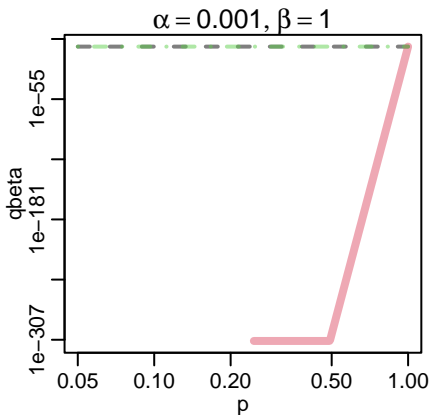
$\alpha = 0.01, \beta = 5$



qbeta(p, <small>, .) vs p for $p \rightarrow 0$

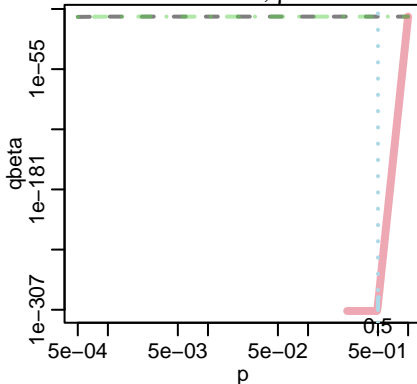


qbeta(p, α , β) for small α and $p \downarrow 0$

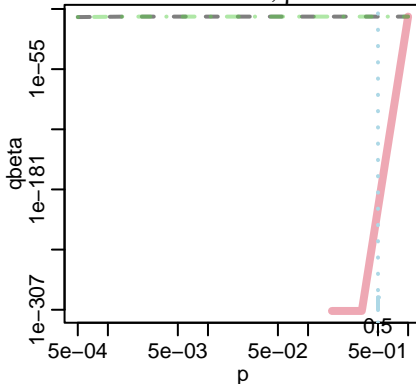


qbeta(p, α , β) for small α and $p \downarrow 0$

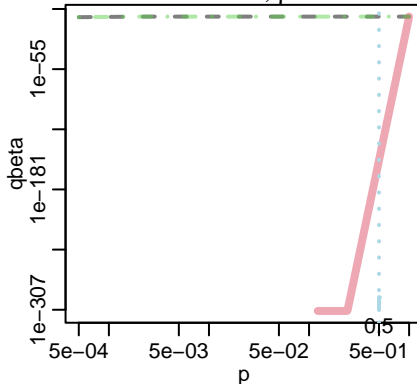
$\alpha = 0.001, \beta = 1$



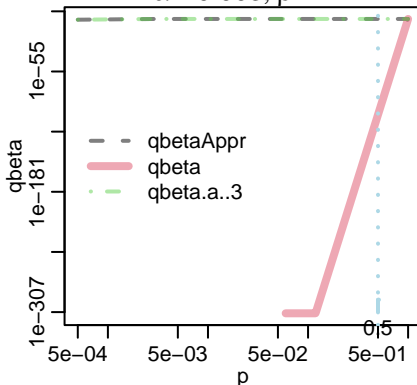
$\alpha = 0.0015, \beta = 1$



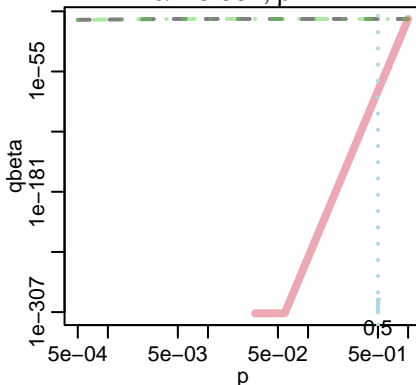
$\alpha = 0.002, \beta = 1$



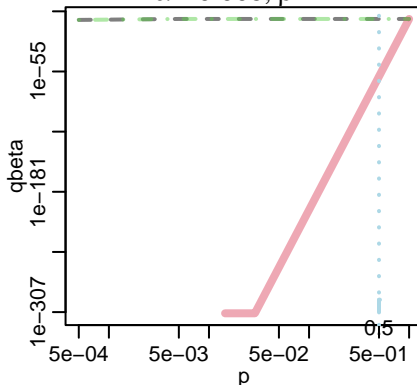
$\alpha = 0.003, \beta = 1$



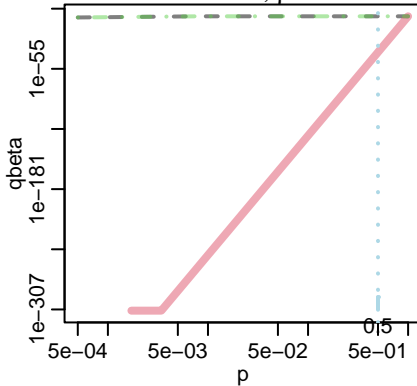
$\alpha = 0.004, \beta = 1$



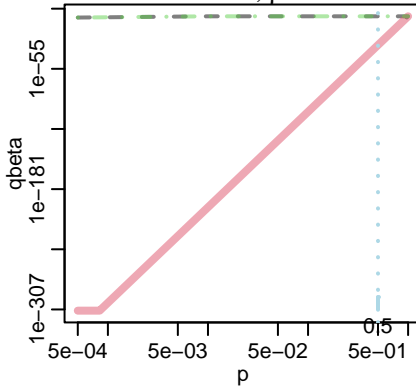
$\alpha = 0.005, \beta = 1$



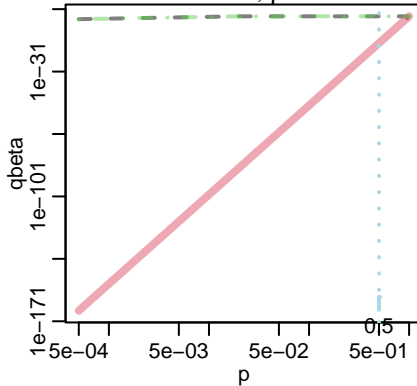
$\alpha = 0.008, \beta = 1$



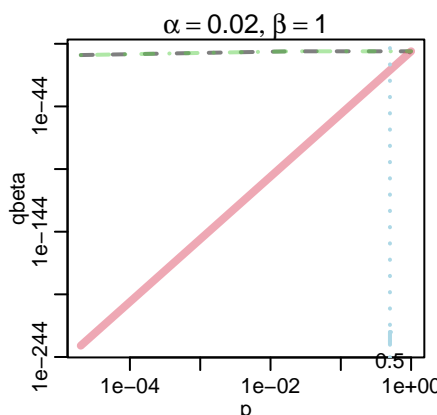
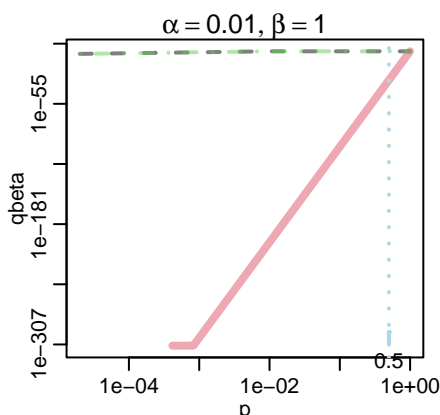
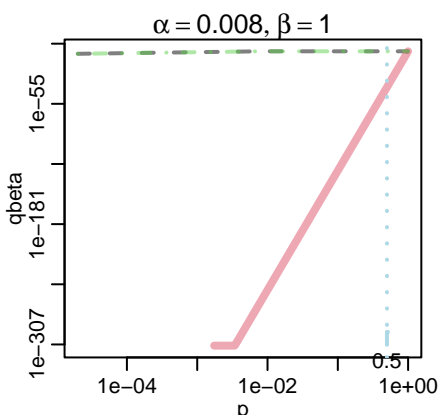
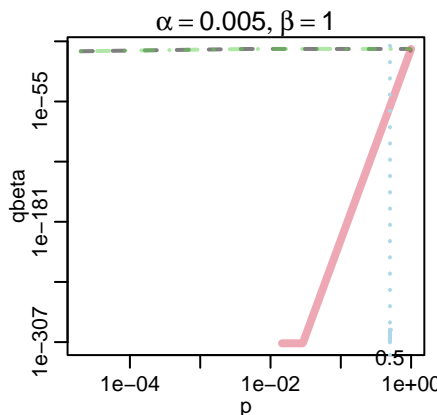
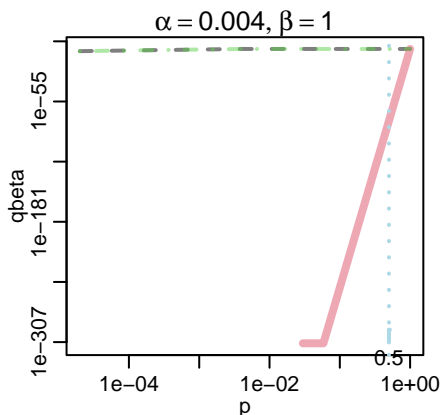
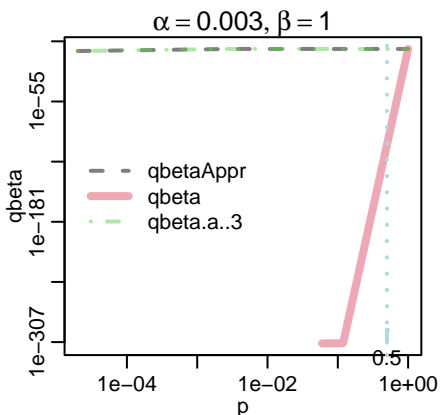
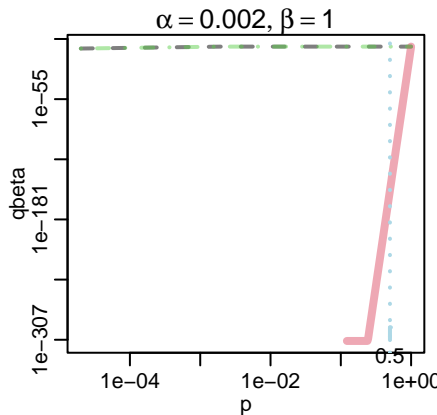
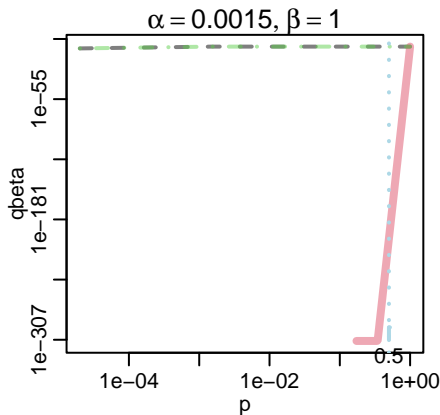
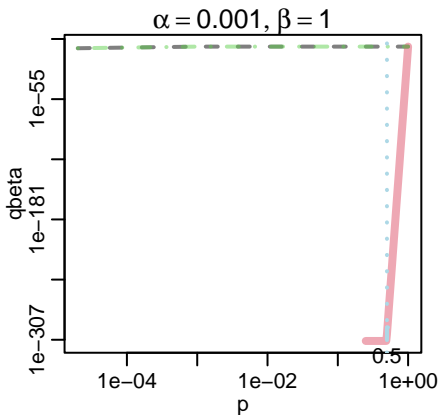
$\alpha = 0.01, \beta = 1$



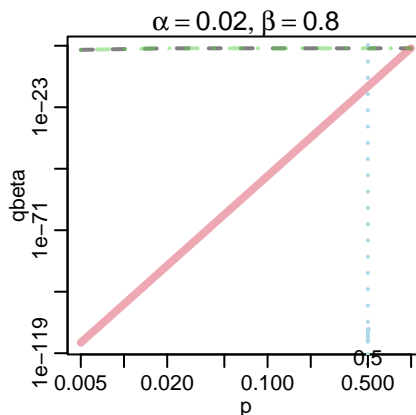
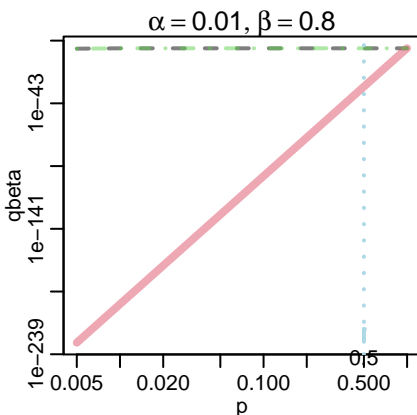
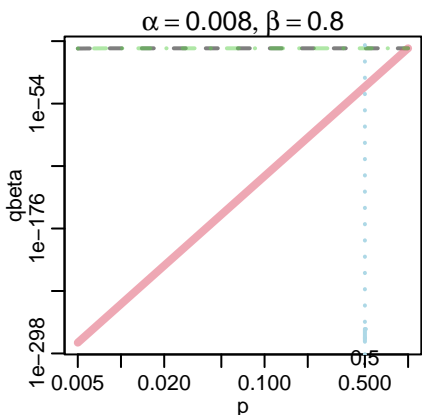
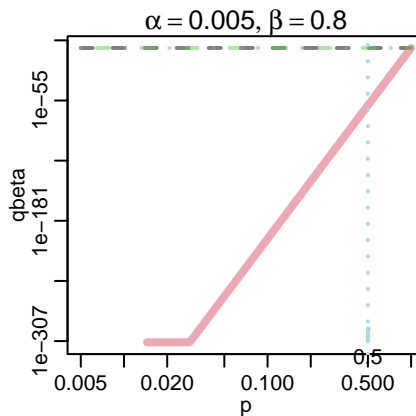
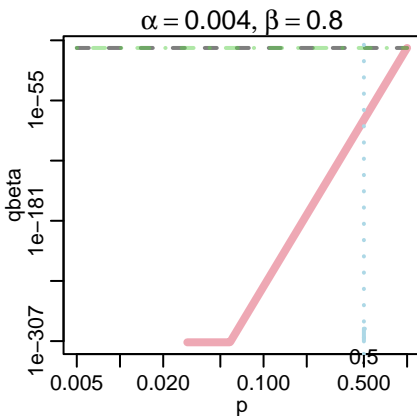
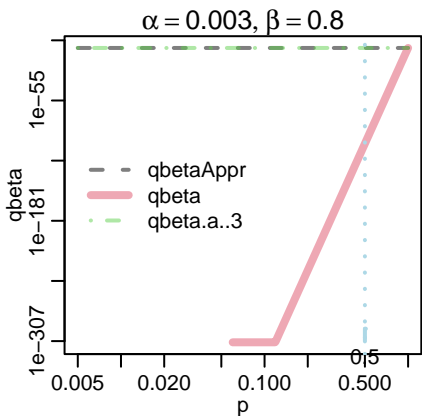
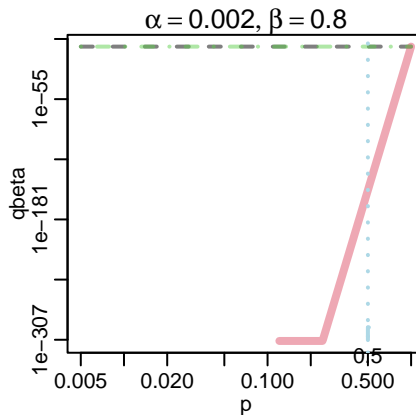
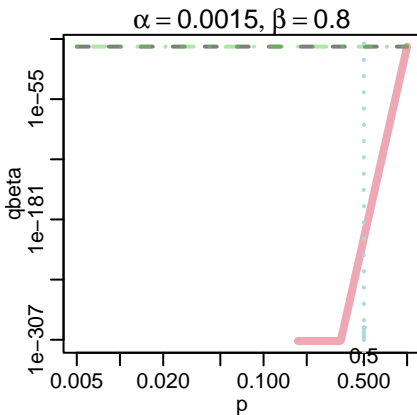
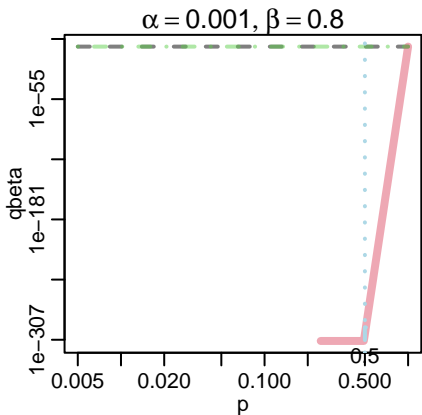
$\alpha = 0.02, \beta = 1$



qbeta(p, α , β) for small α and $p \downarrow 0$

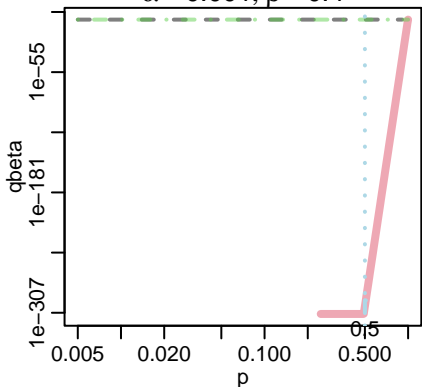


qbeta(p, α , β) for small α and $p \downarrow 0$

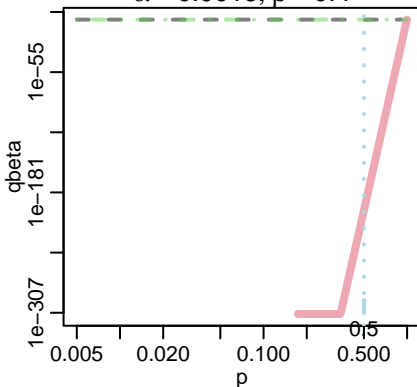


qbeta(p, α , β) for small α and $p \downarrow 0$

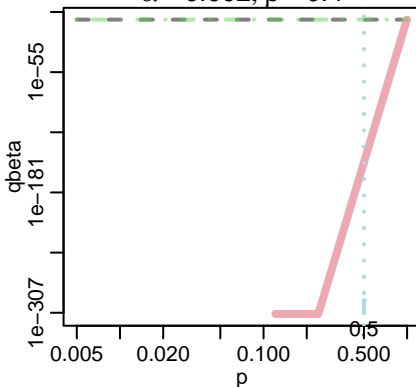
$\alpha = 0.001, \beta = 0.4$



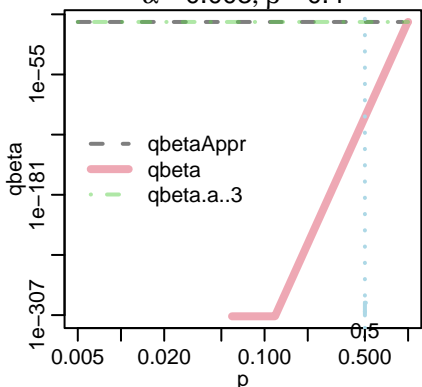
$\alpha = 0.0015, \beta = 0.4$



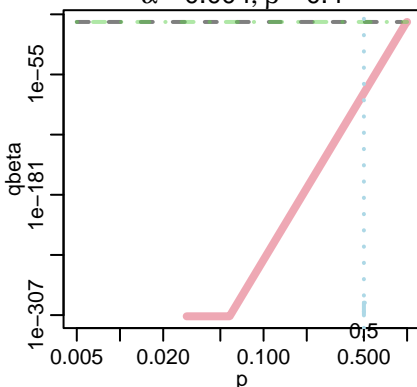
$\alpha = 0.002, \beta = 0.4$



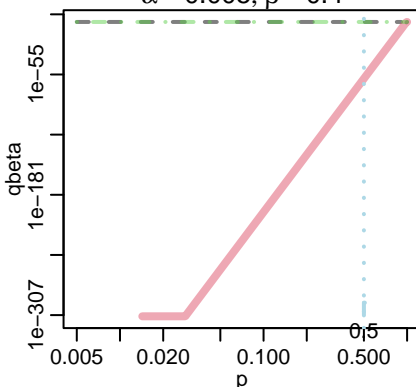
$\alpha = 0.003, \beta = 0.4$



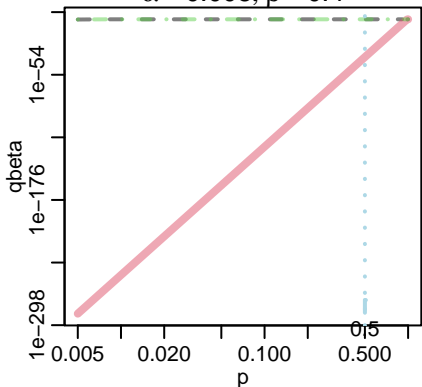
$\alpha = 0.004, \beta = 0.4$



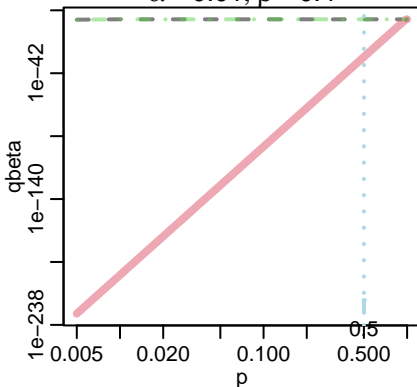
$\alpha = 0.005, \beta = 0.4$



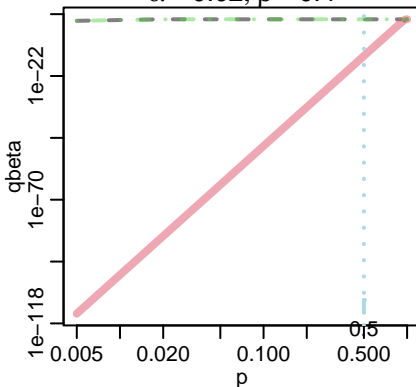
$\alpha = 0.008, \beta = 0.4$



$\alpha = 0.01, \beta = 0.4$

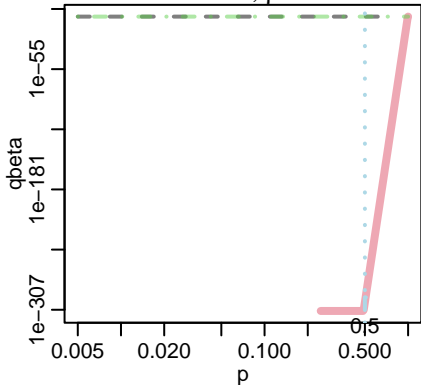


$\alpha = 0.02, \beta = 0.4$

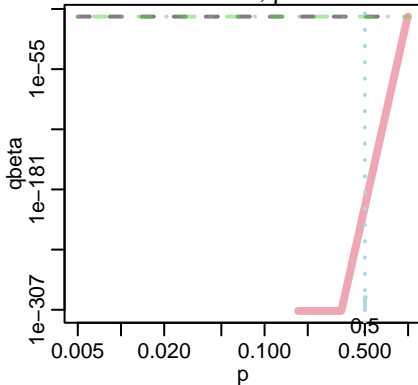


qbeta(p, α , β) for small α and $p \downarrow 0$

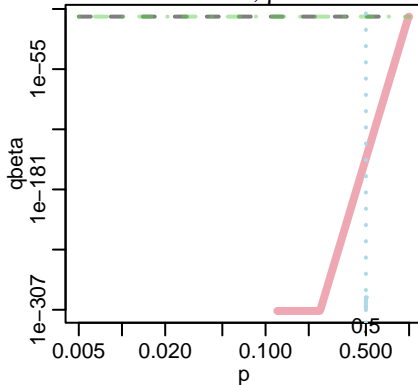
$\alpha = 0.001, \beta = 0.2$



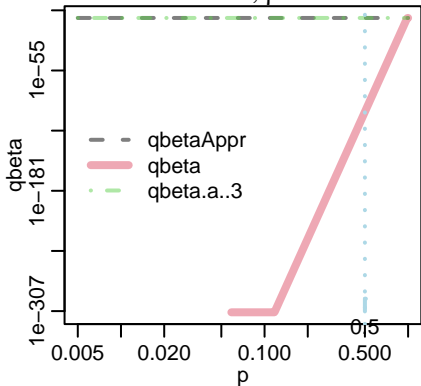
$\alpha = 0.0015, \beta = 0.2$



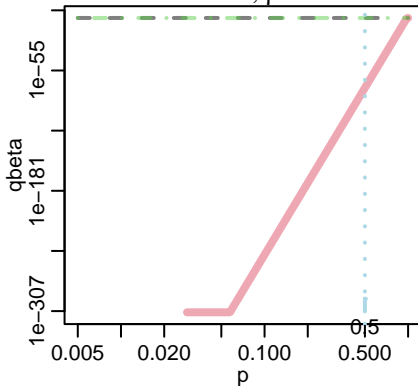
$\alpha = 0.002, \beta = 0.2$



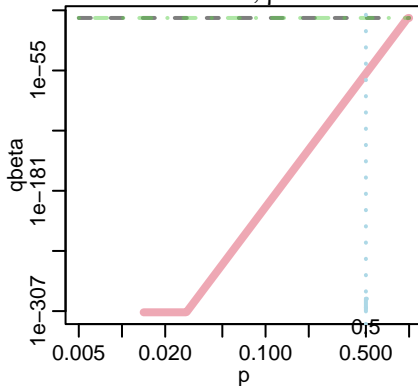
$\alpha = 0.003, \beta = 0.2$



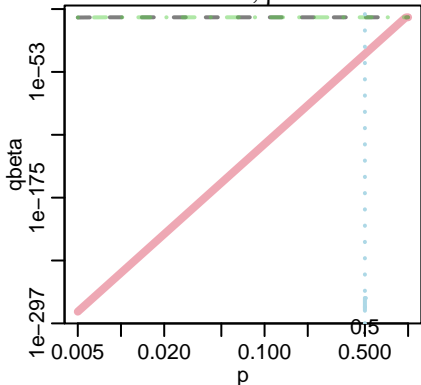
$\alpha = 0.004, \beta = 0.2$



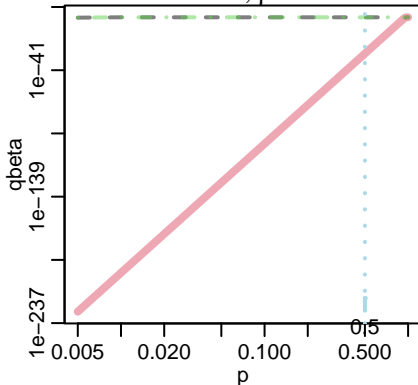
$\alpha = 0.005, \beta = 0.2$



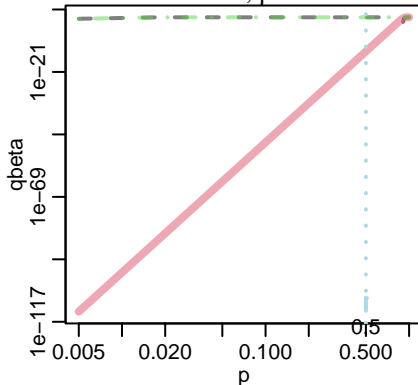
$\alpha = 0.008, \beta = 0.2$



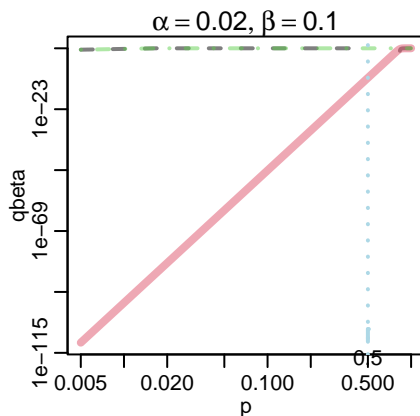
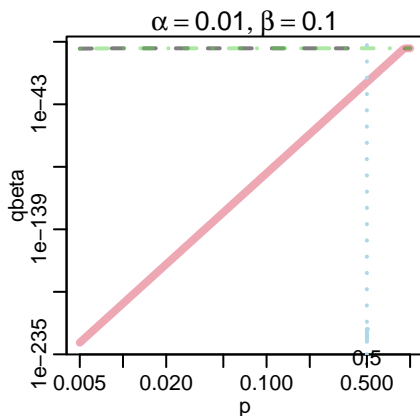
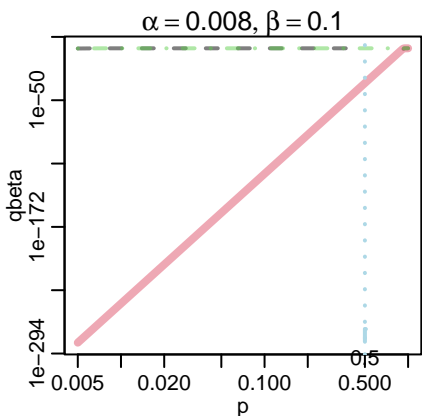
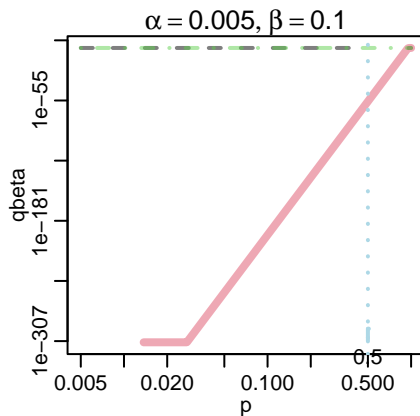
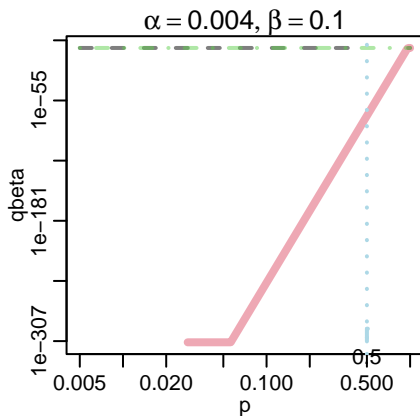
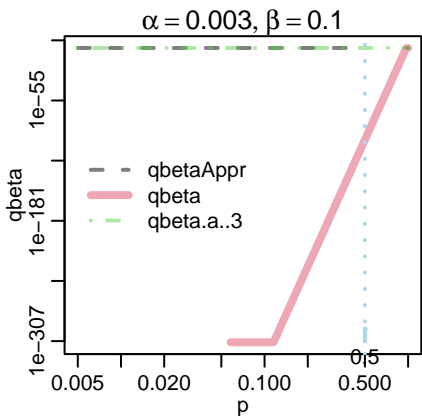
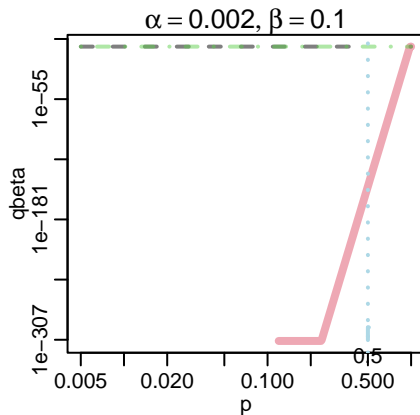
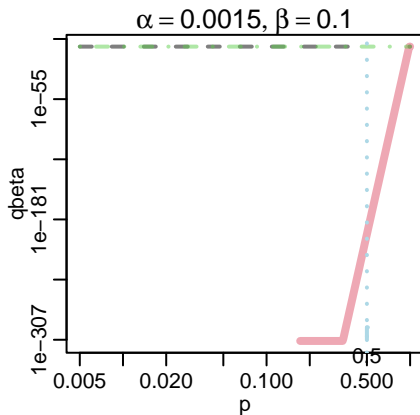
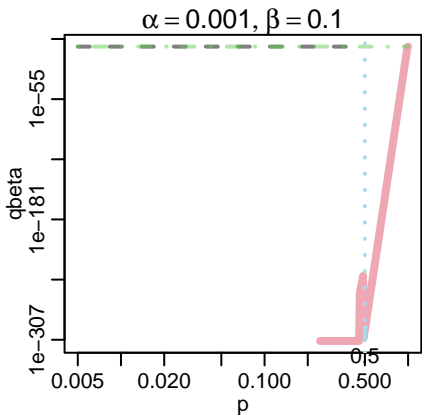
$\alpha = 0.01, \beta = 0.2$



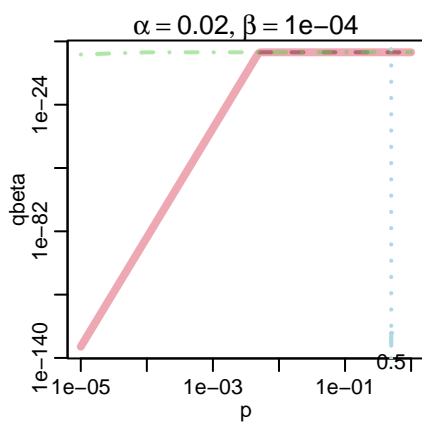
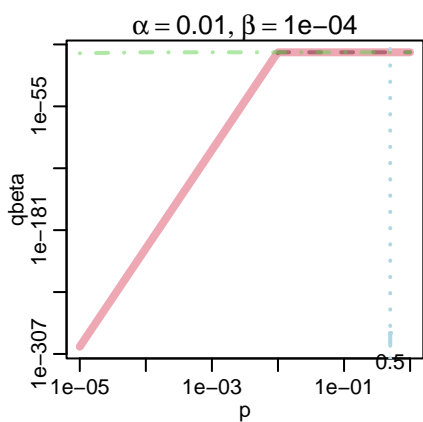
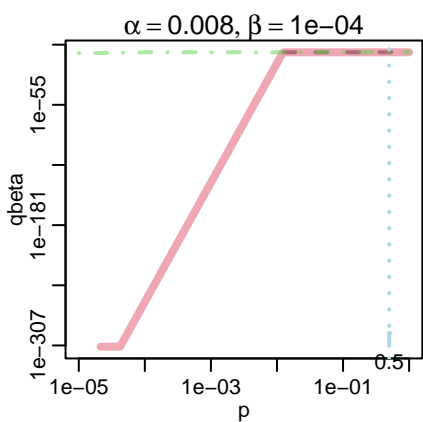
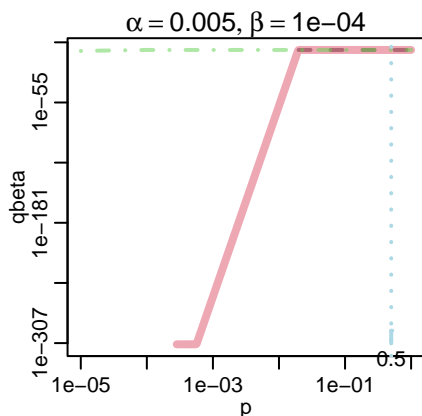
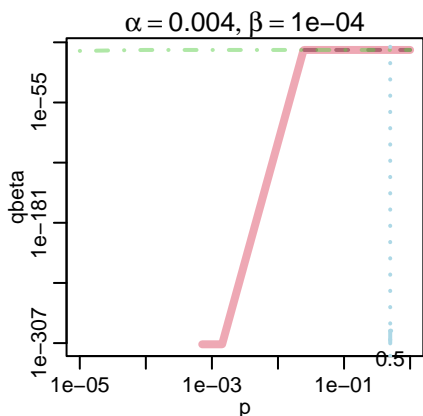
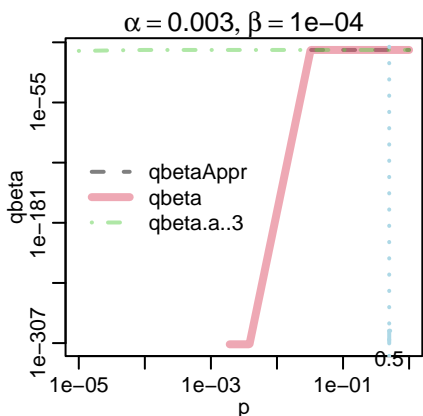
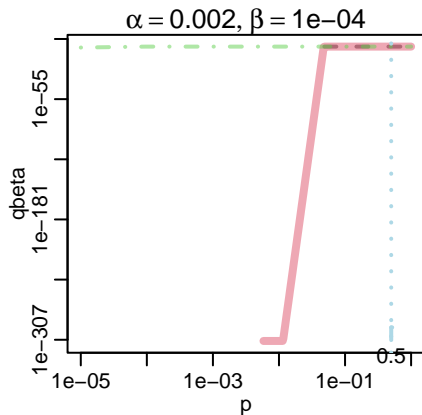
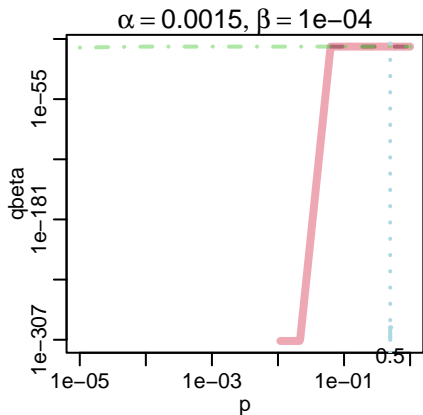
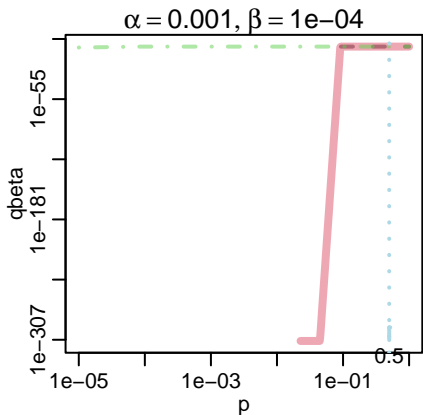
$\alpha = 0.02, \beta = 0.2$



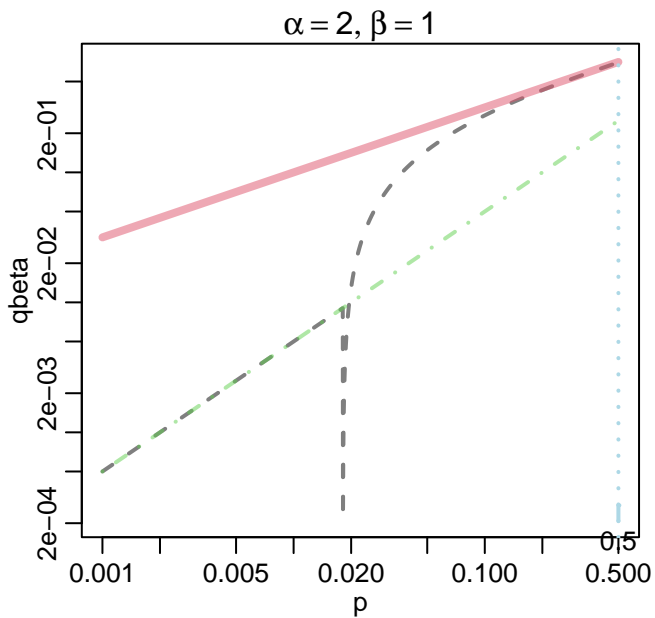
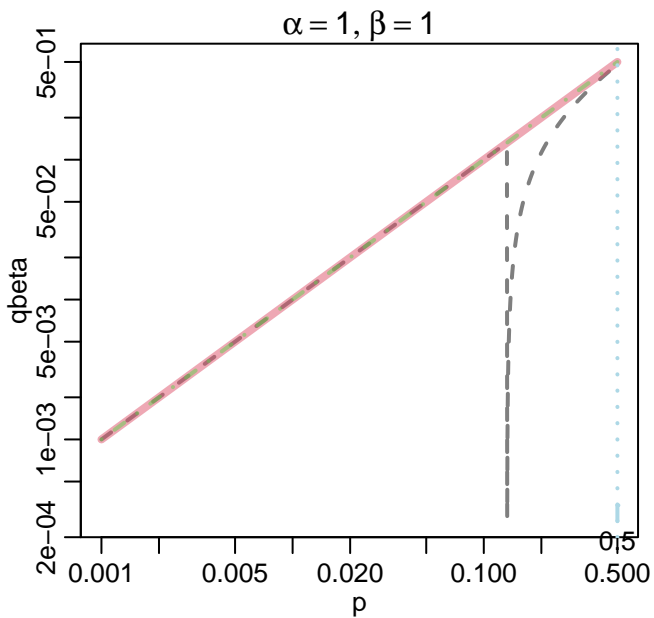
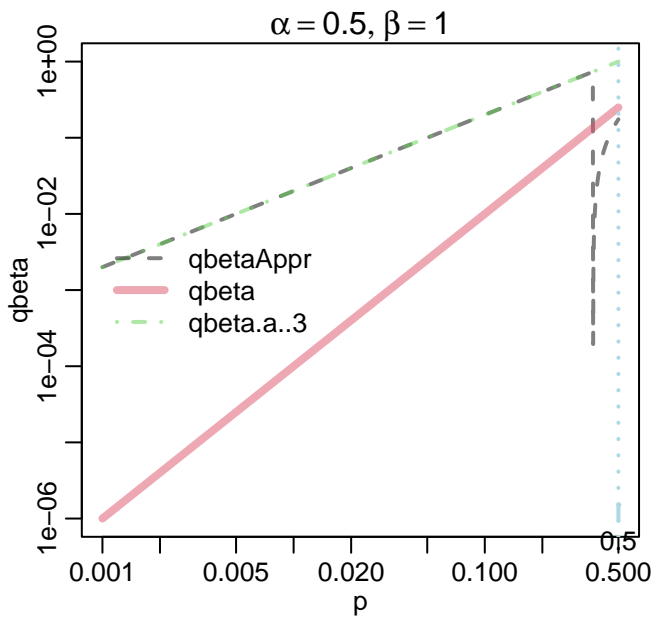
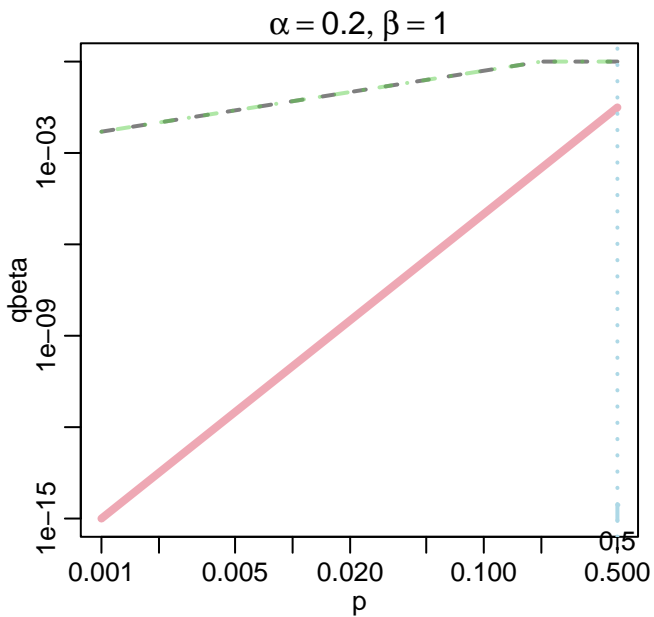
qbeta(p, α , β) for small α and $p \downarrow 0$

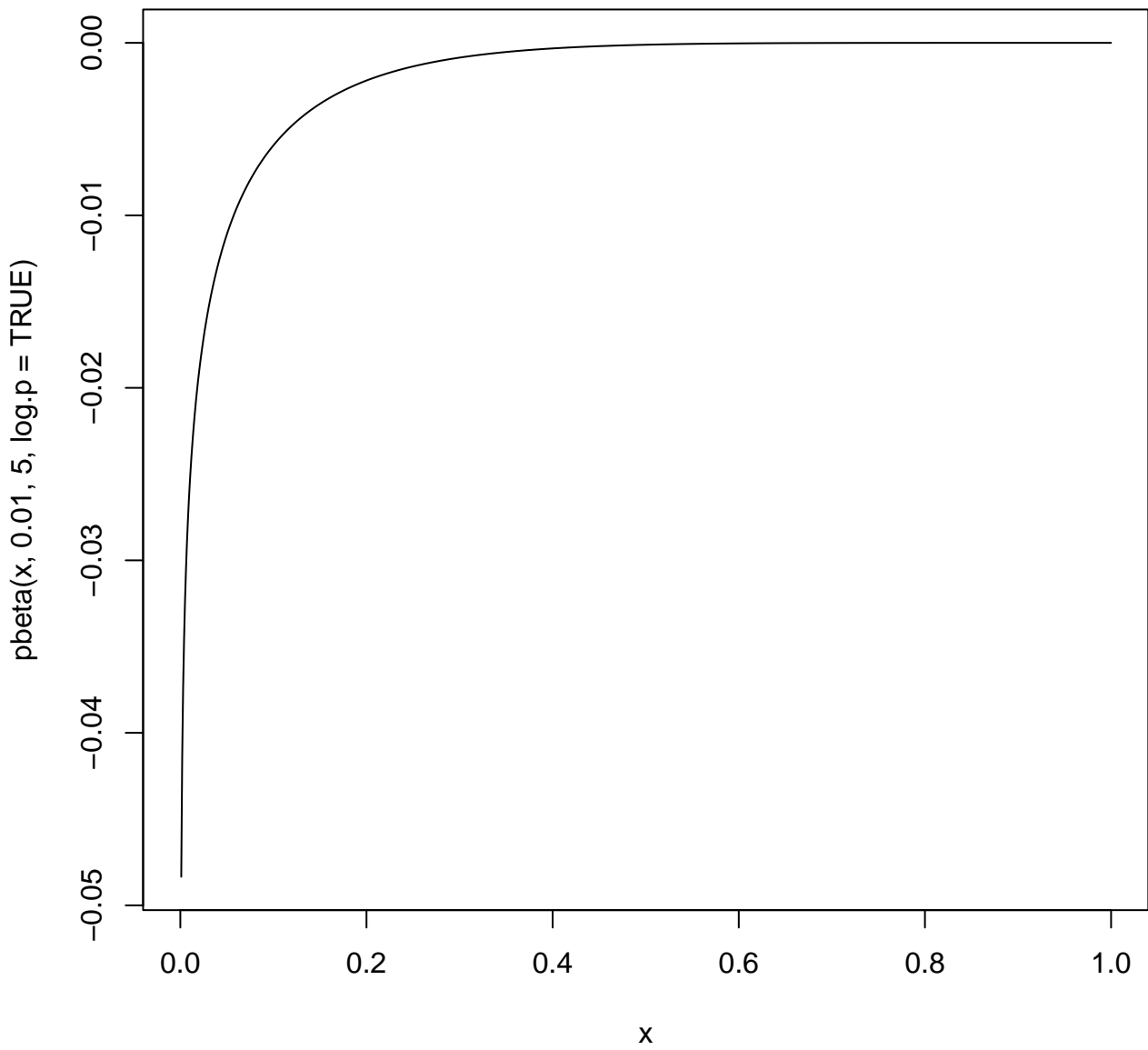


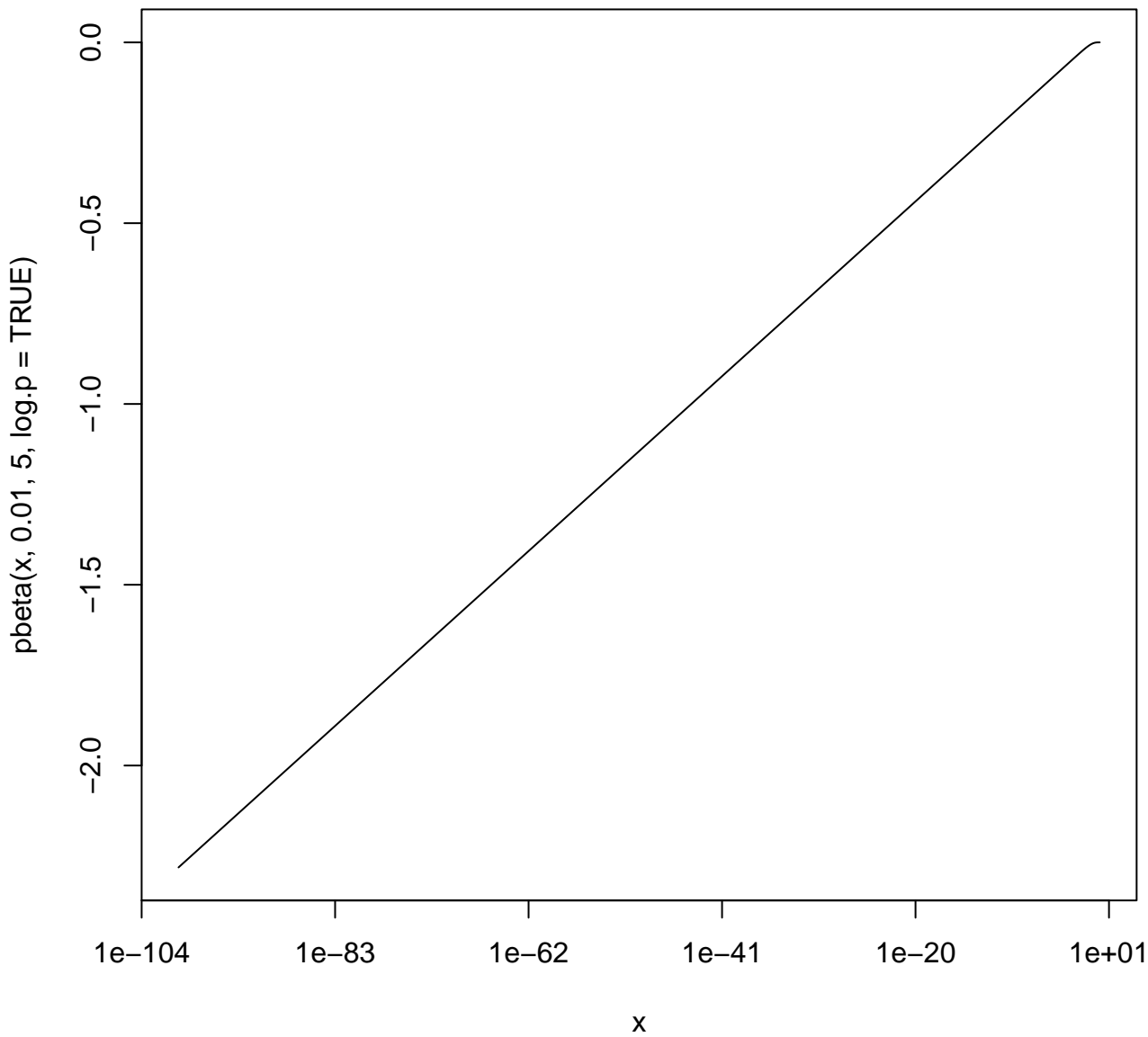
qbeta(p, α , β) for small α and $p \downarrow 0$



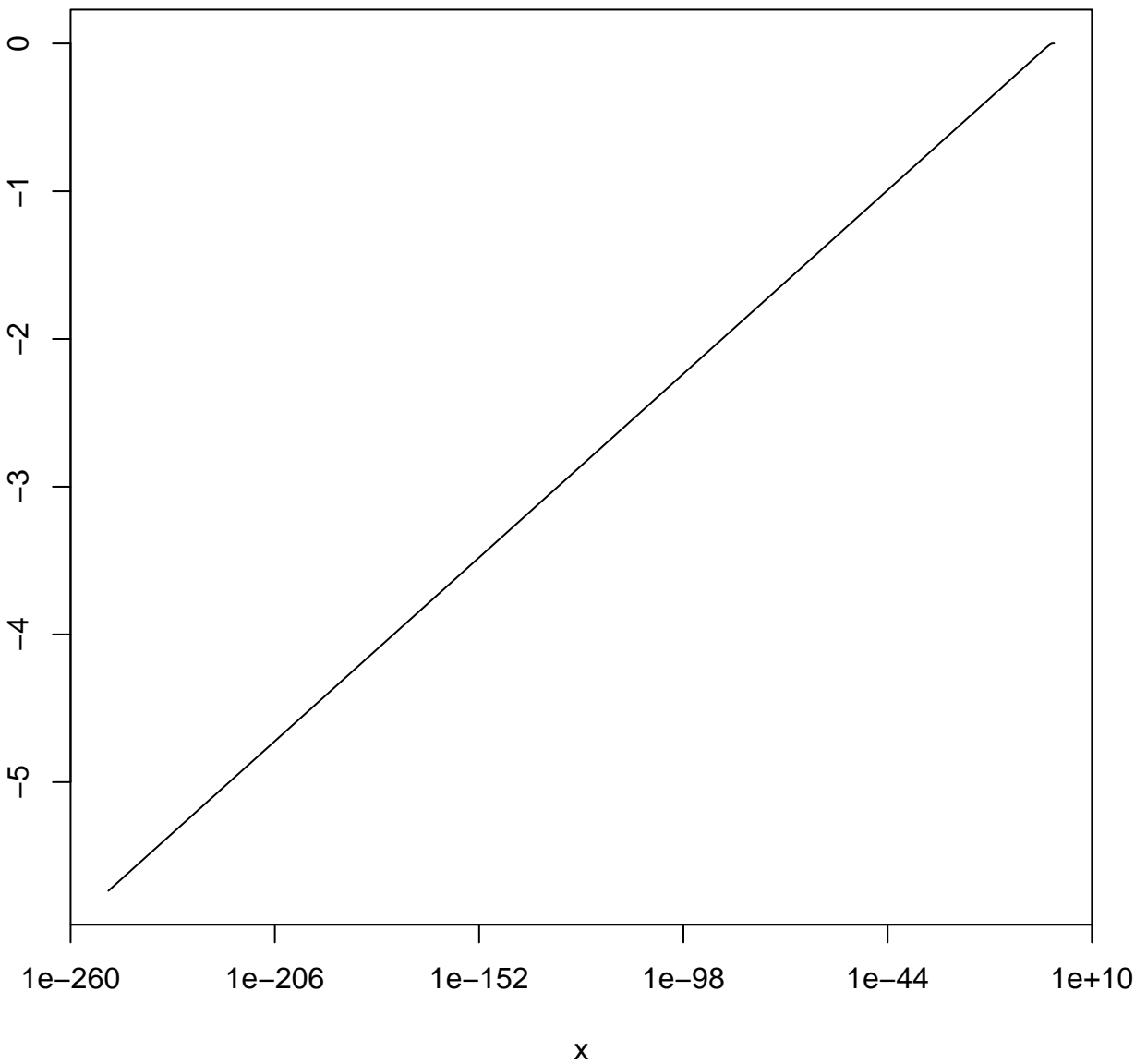
qbeta(p, α , β) for small α and $p \downarrow 0$

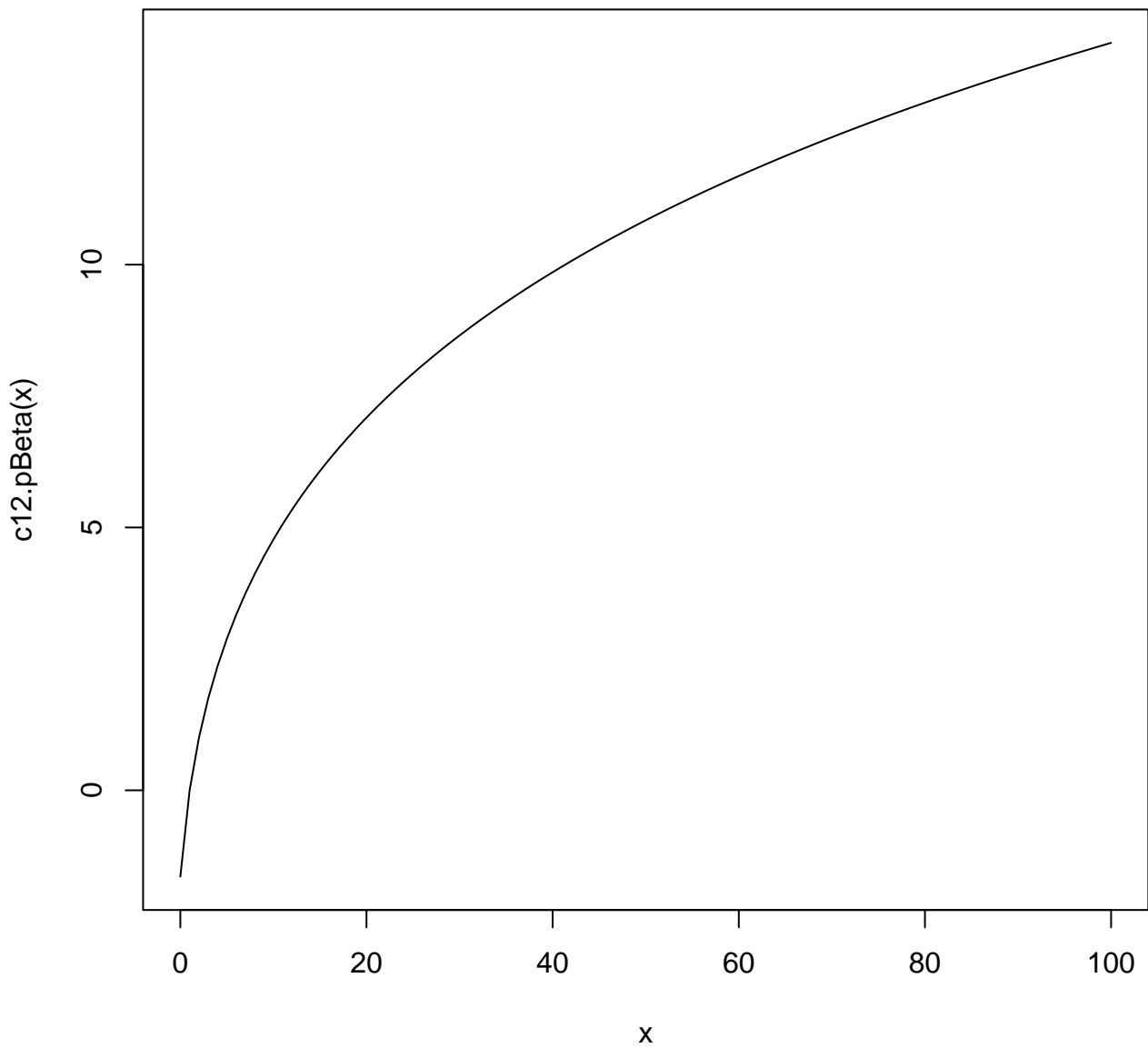


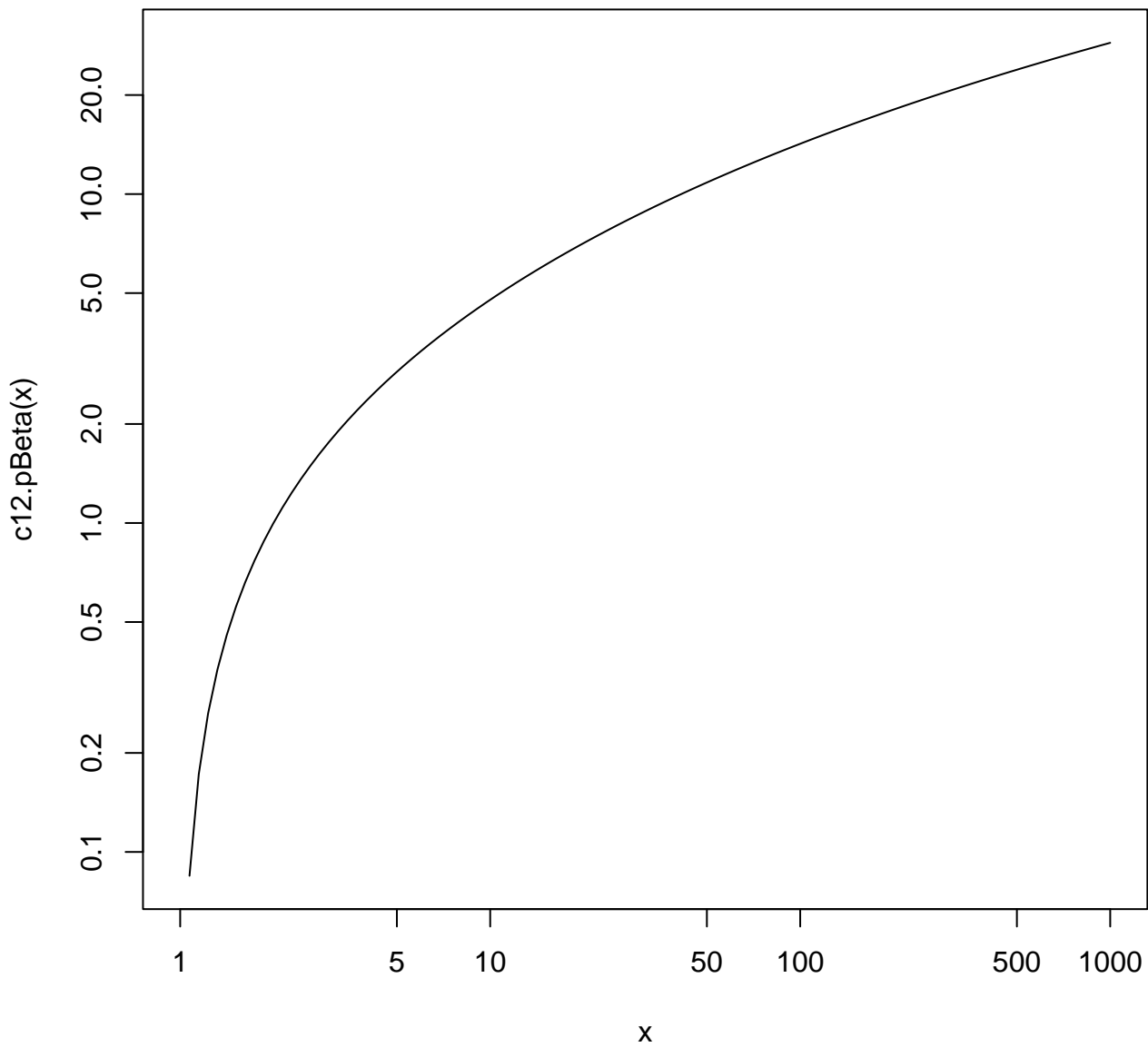




pbeta(x, 0.01, 5, log.p = TRUE)

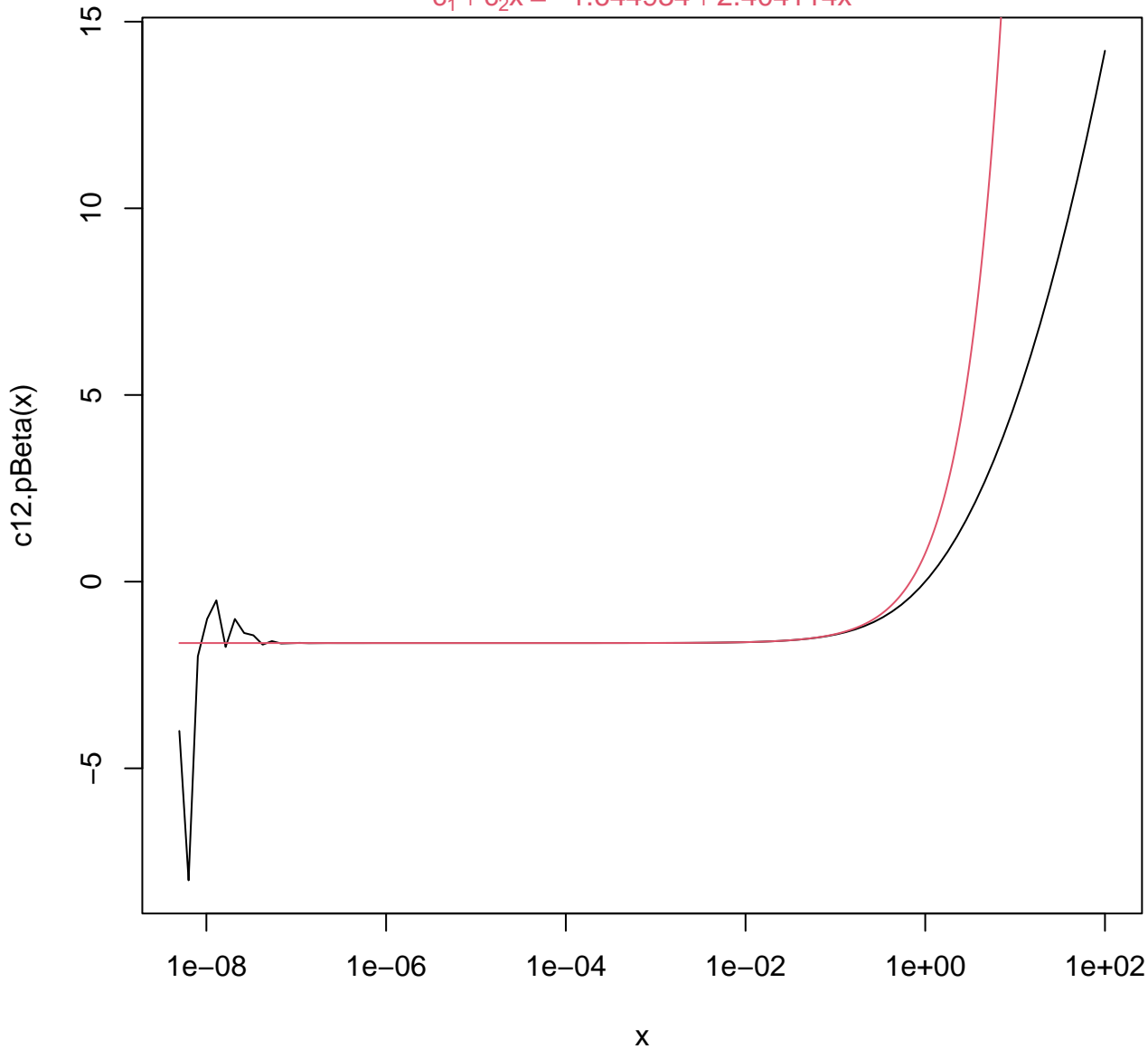






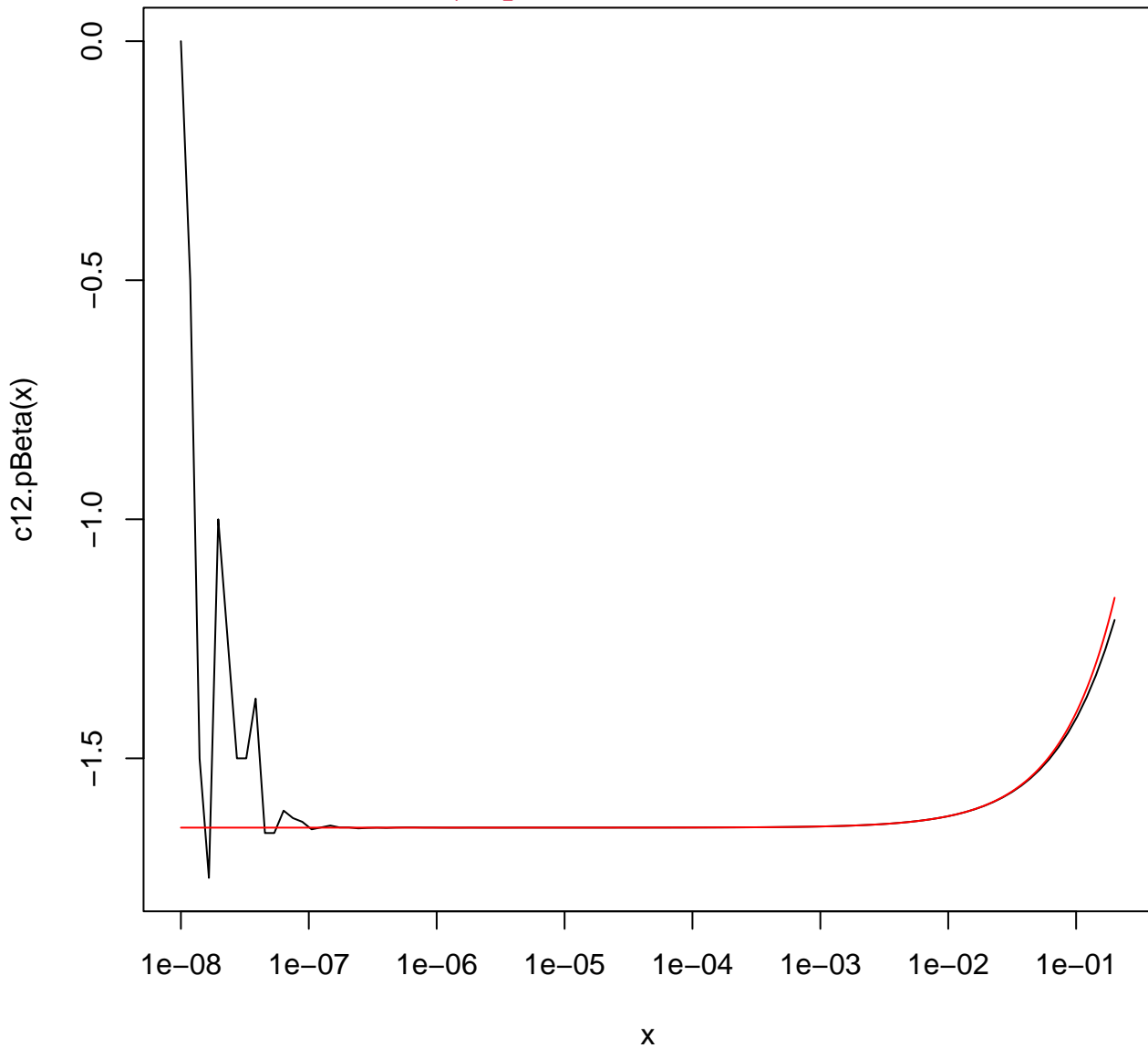
c12.pBeta(x) and its (log-)linear approximation

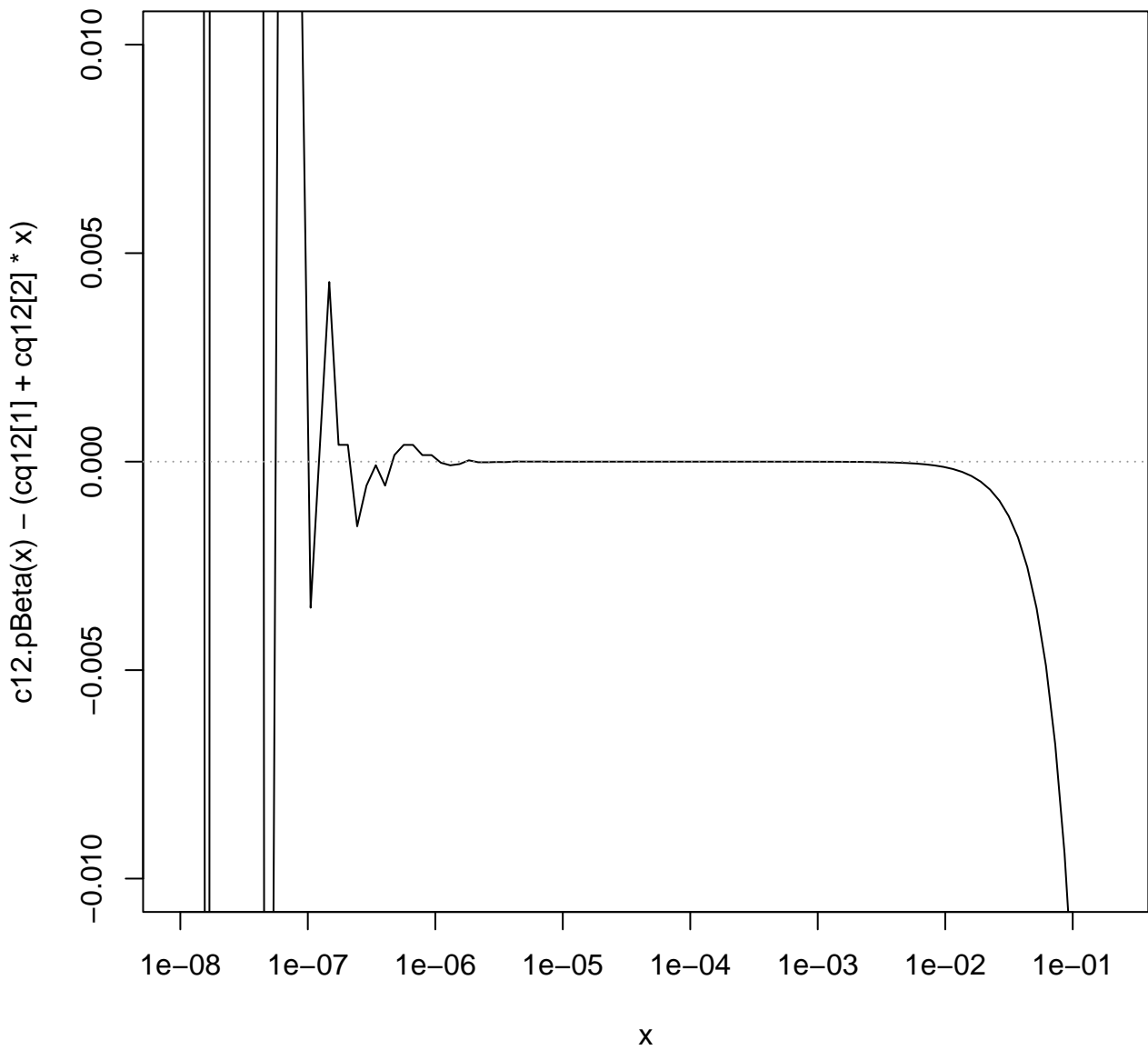
$$c_1 + c_2x = -1.644934 + 2.404114x$$

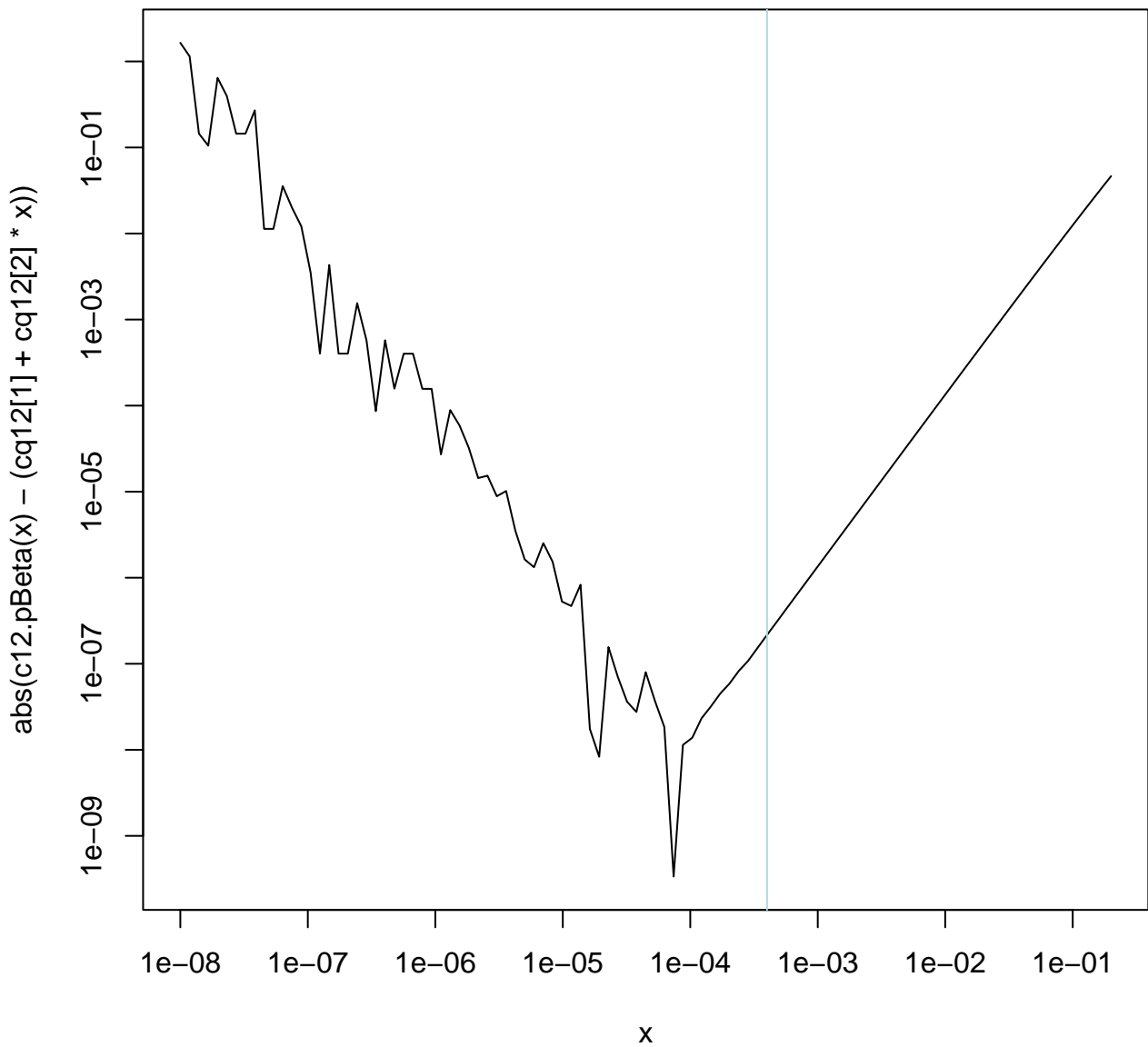


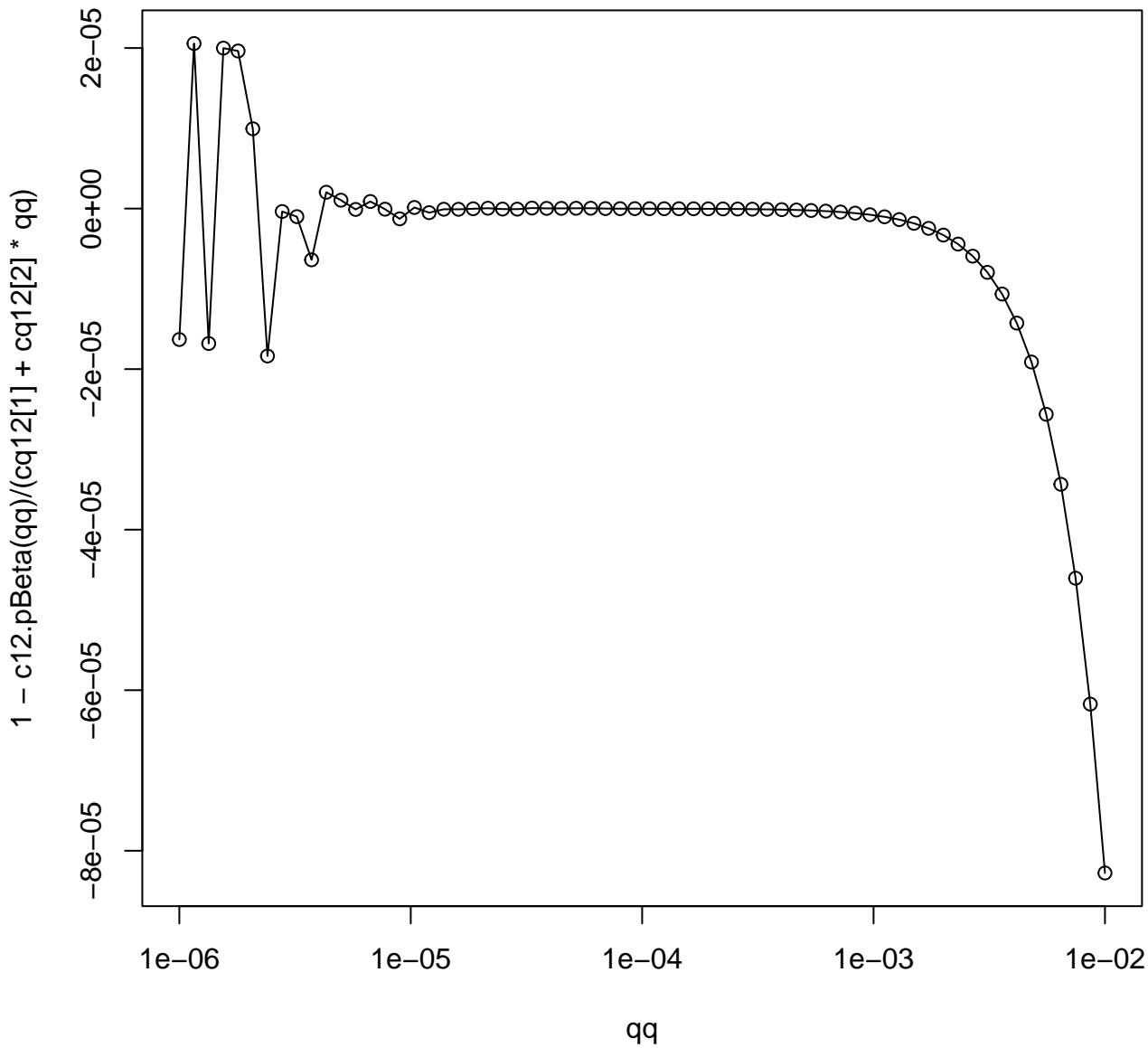
c12.pBeta(x) and its (log-)linear approximation

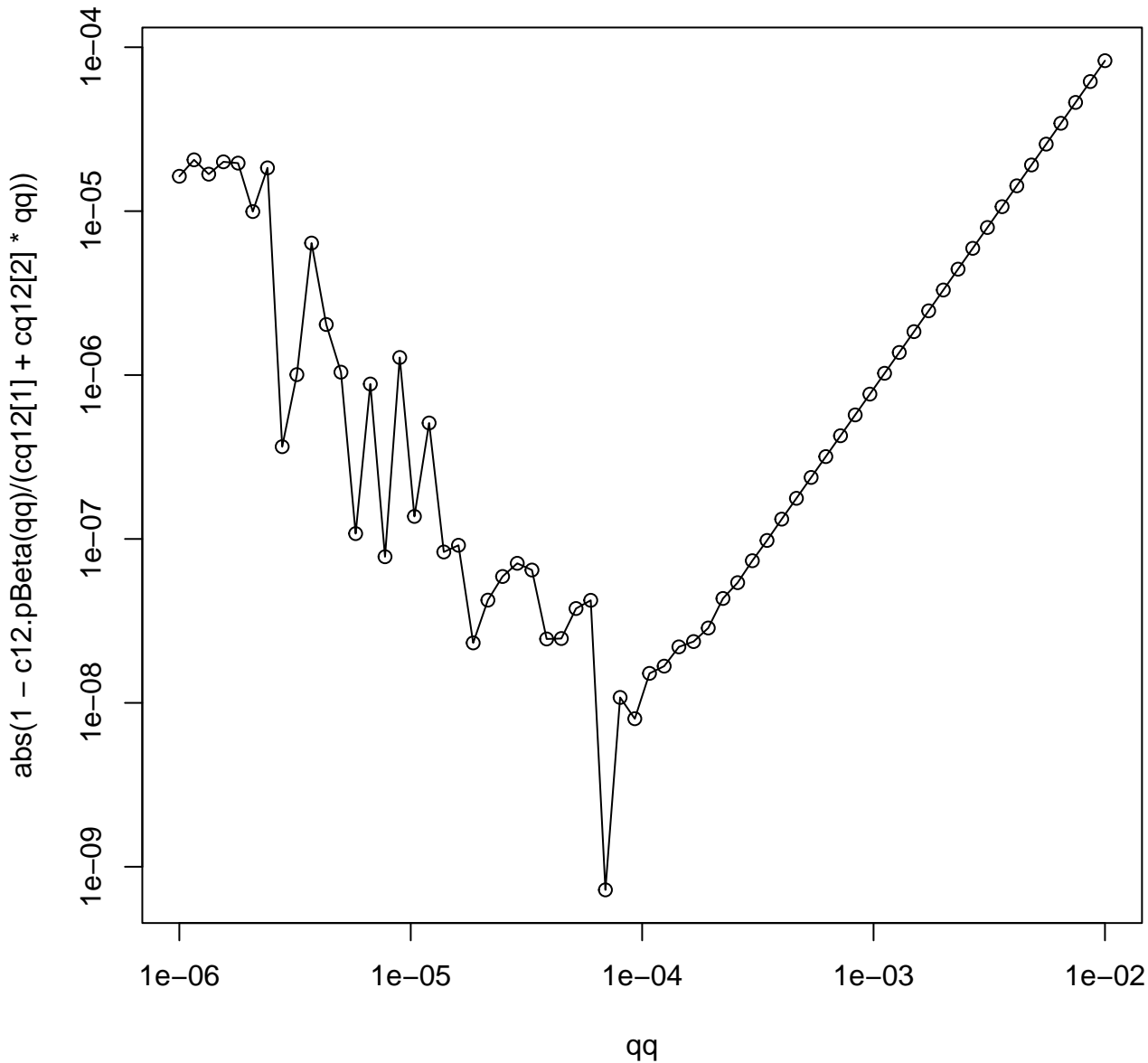
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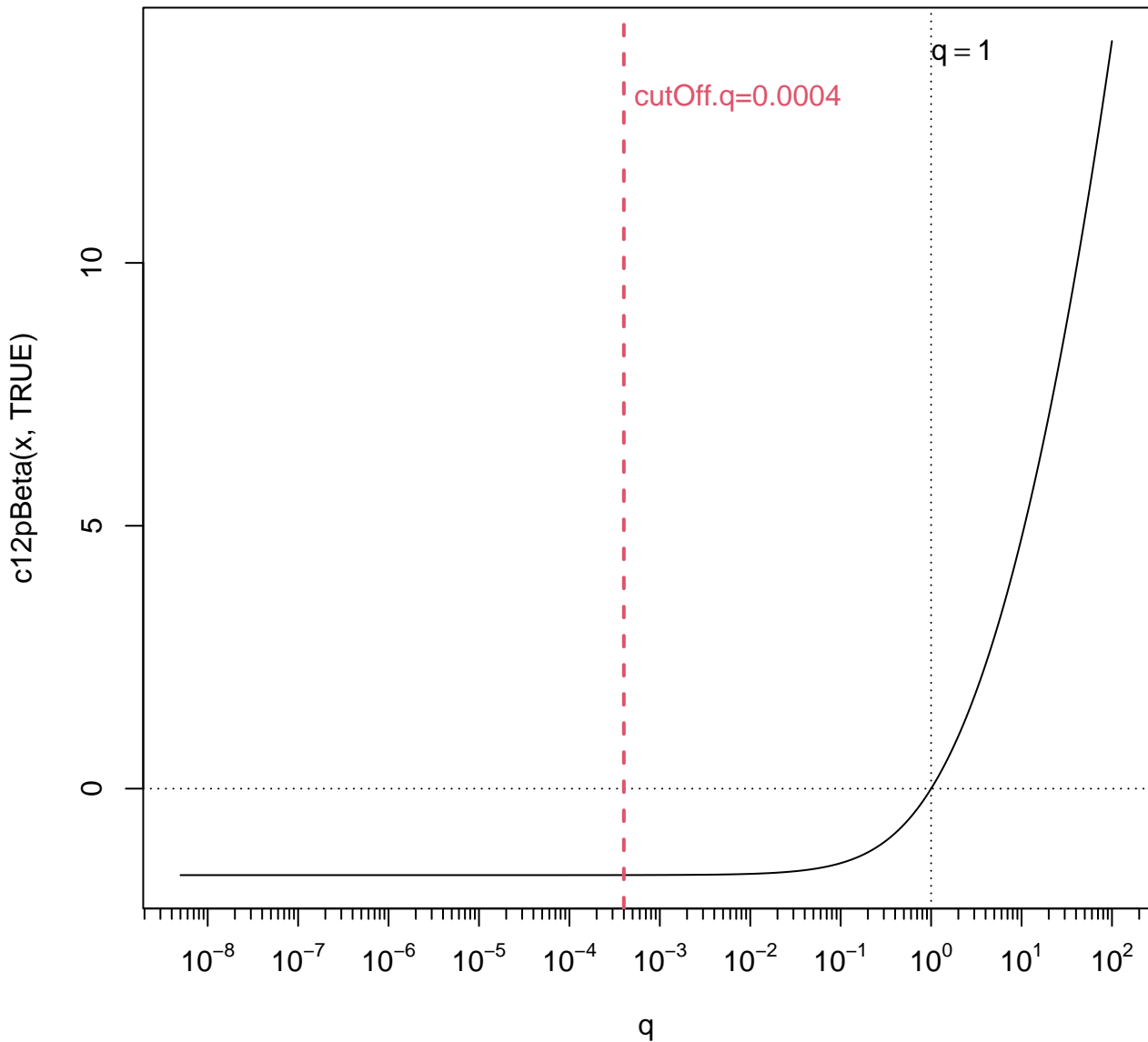




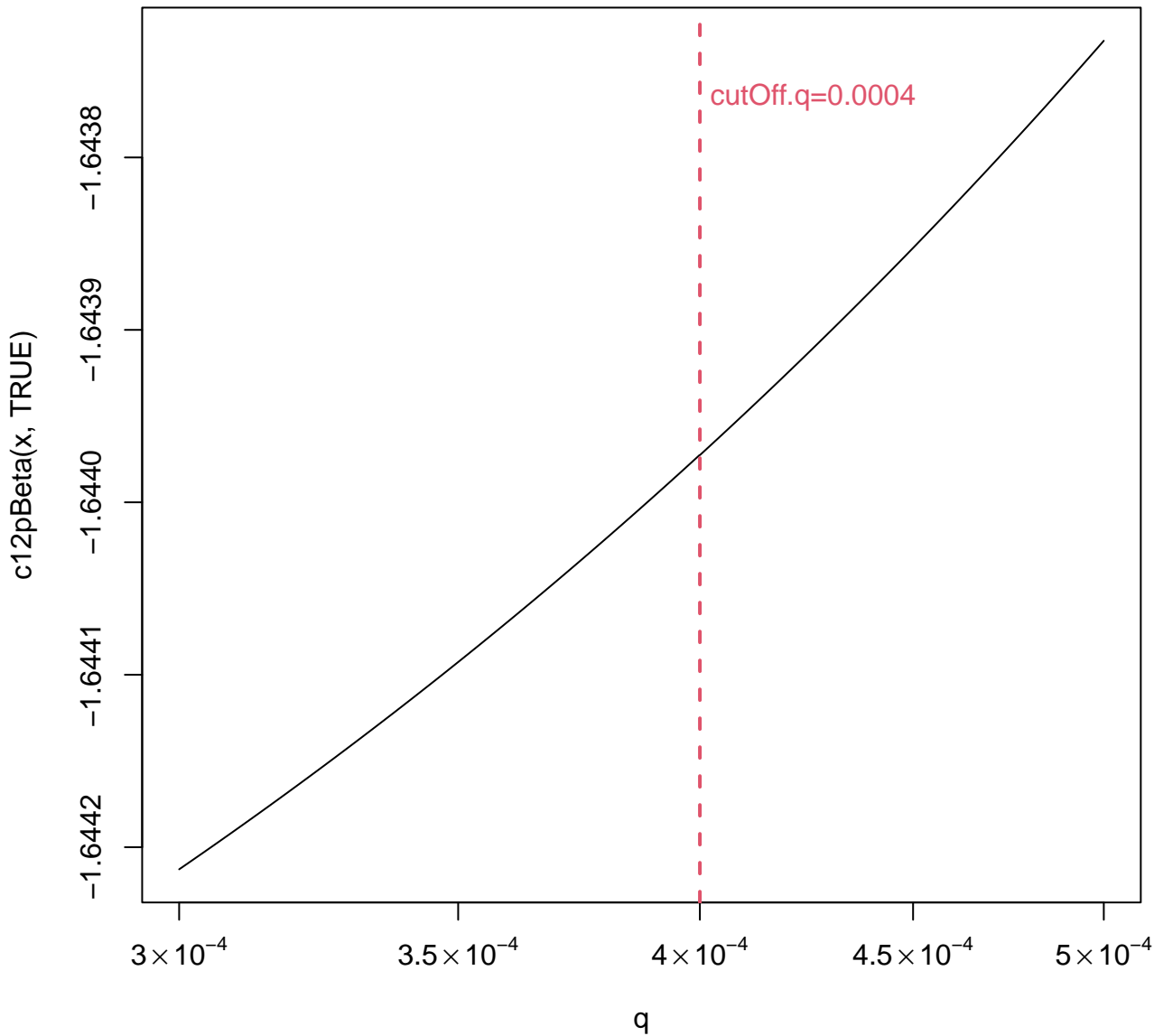




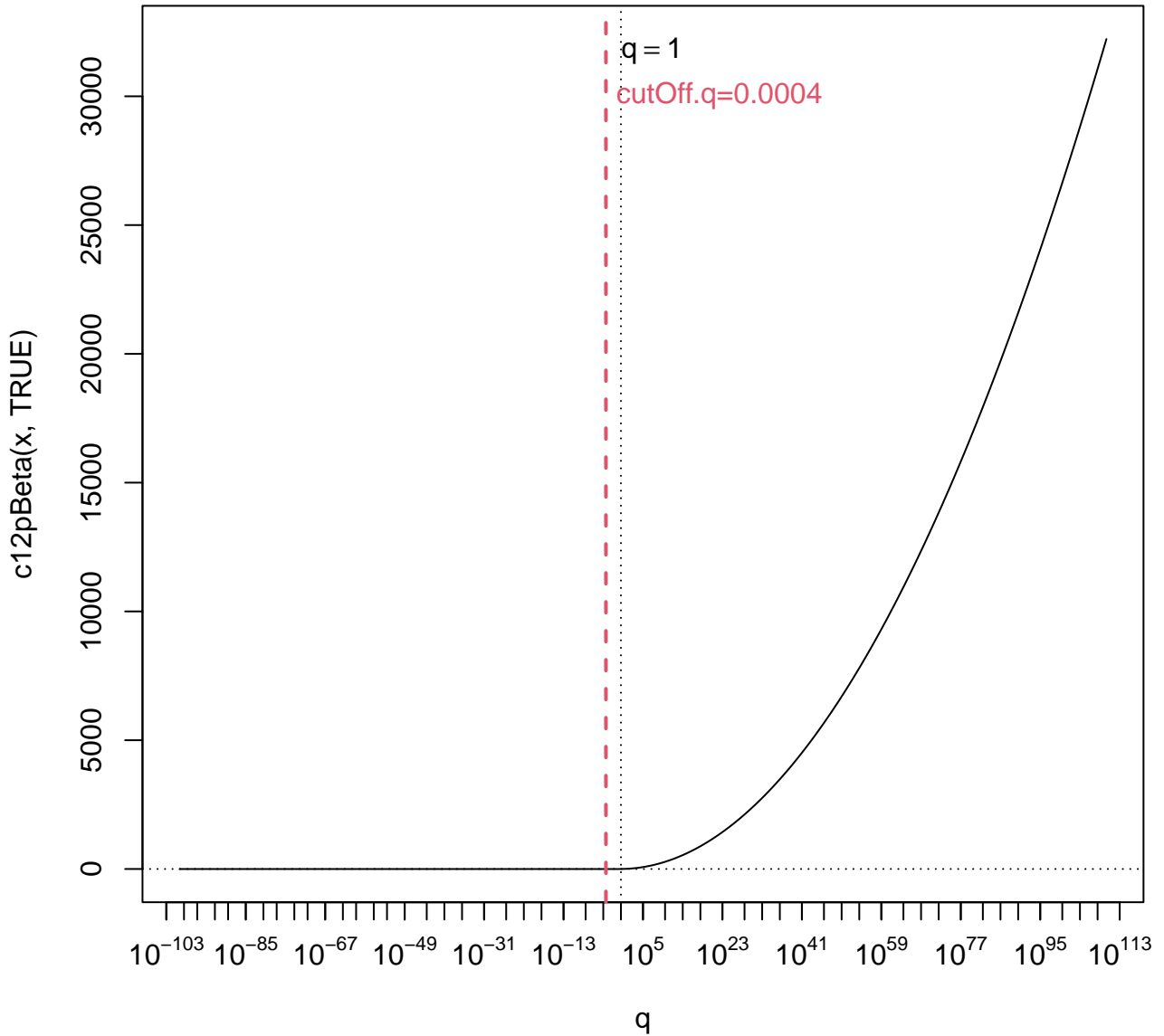
$c_2(q)$ from Beta expansion $pB(p, q) \approx 1 + c_1p + c_2p^2$



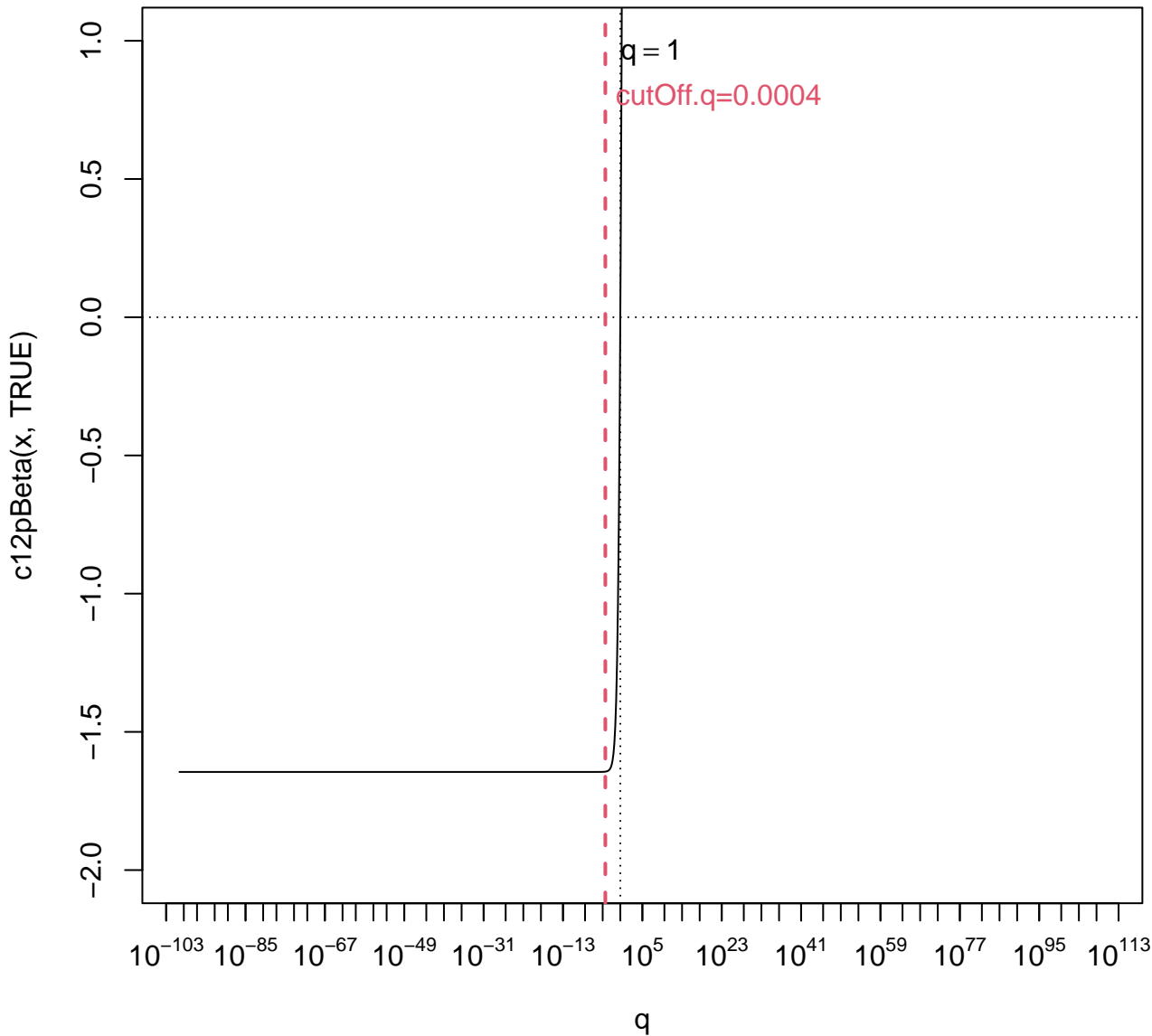
$c_2(q)$ from Beta expansion $pB(p, q) \approx 1 + c_1p + c_2p^2$



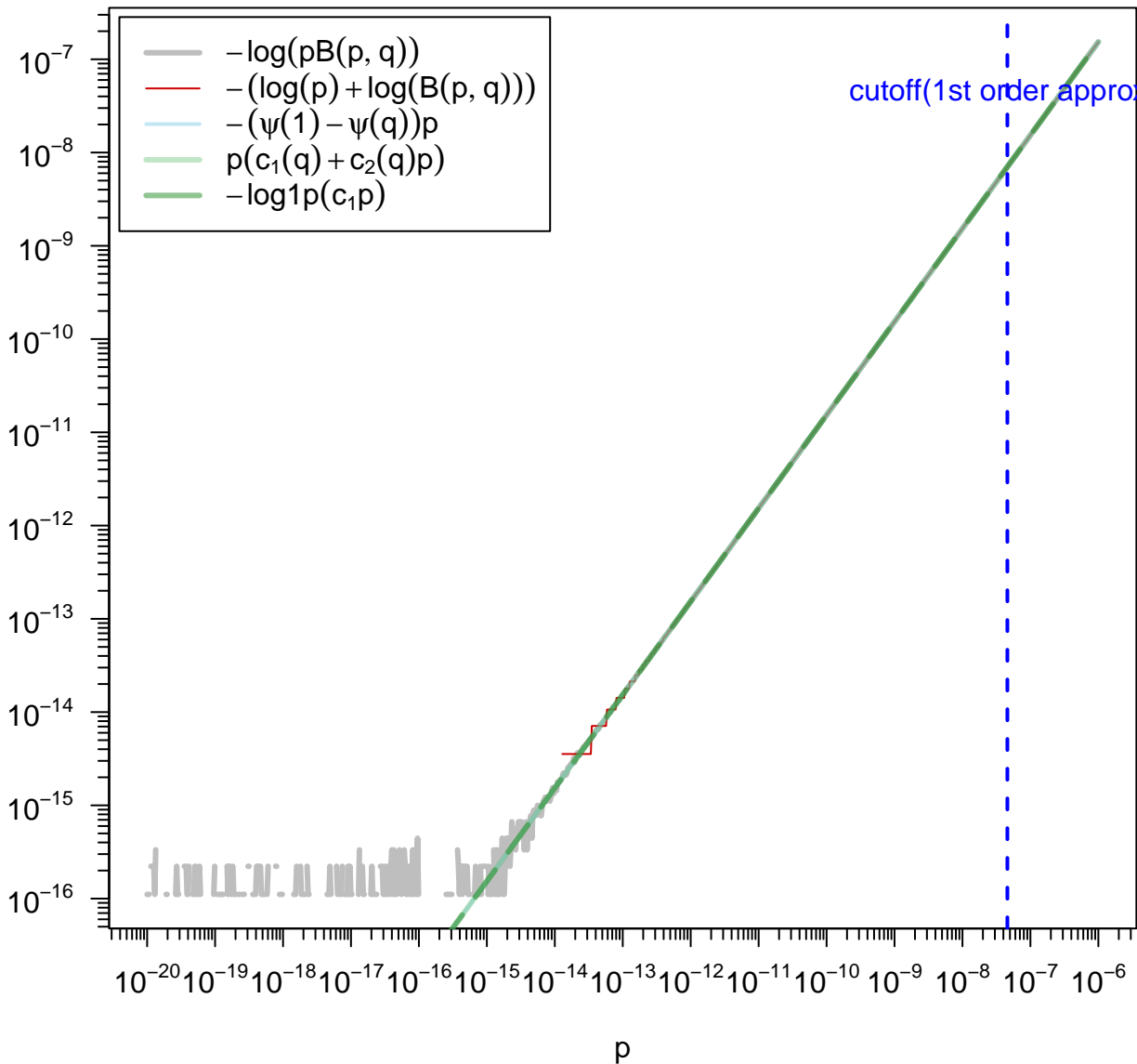
$$c_2(q) \text{ from Beta expansion } pB(p, q) \approx 1 + c_1p + c_2p^2$$



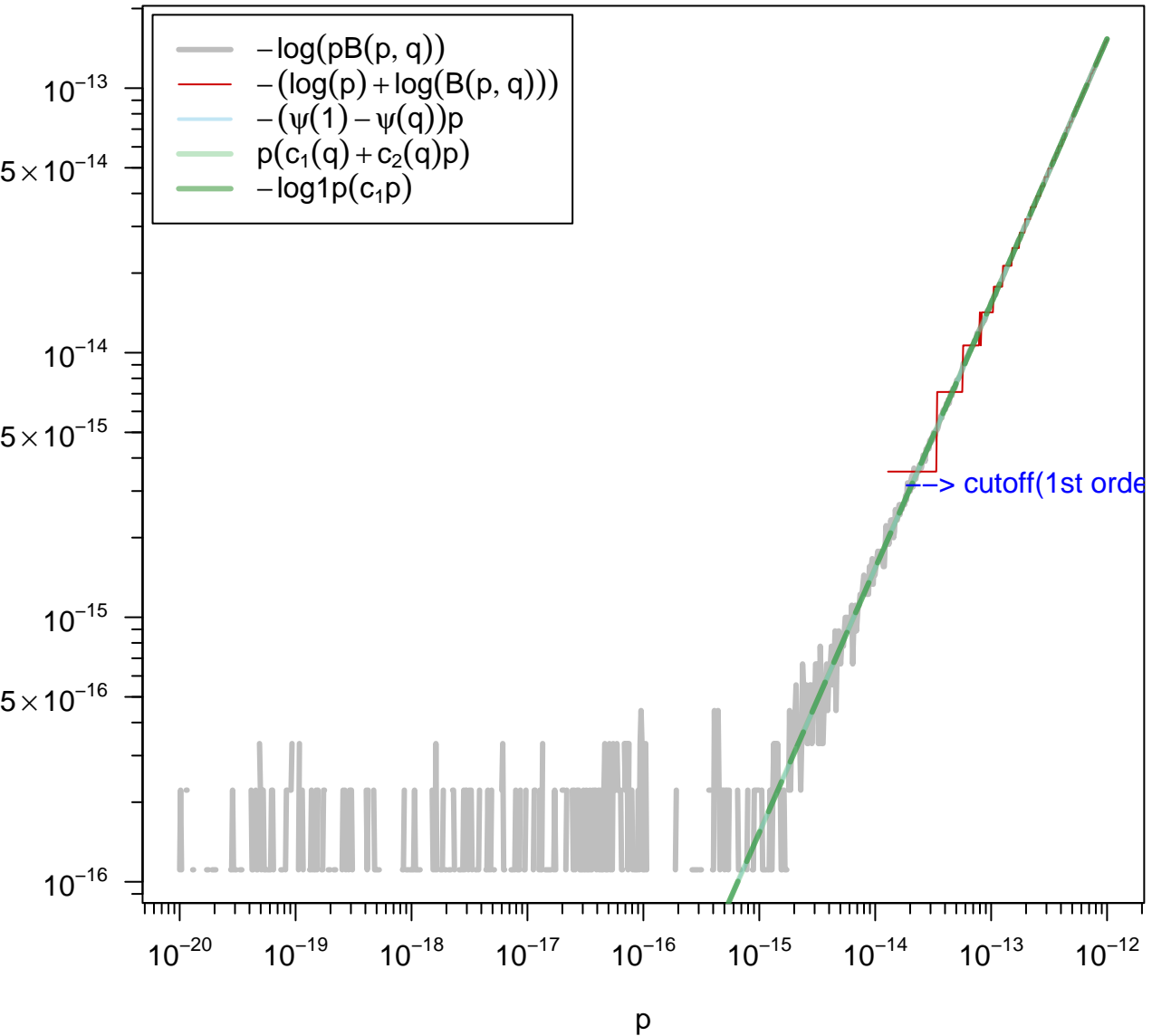
$$c_2(q) \text{ from Beta expansion } pB(p, q) \approx 1 + c_1p + c_2p^2$$



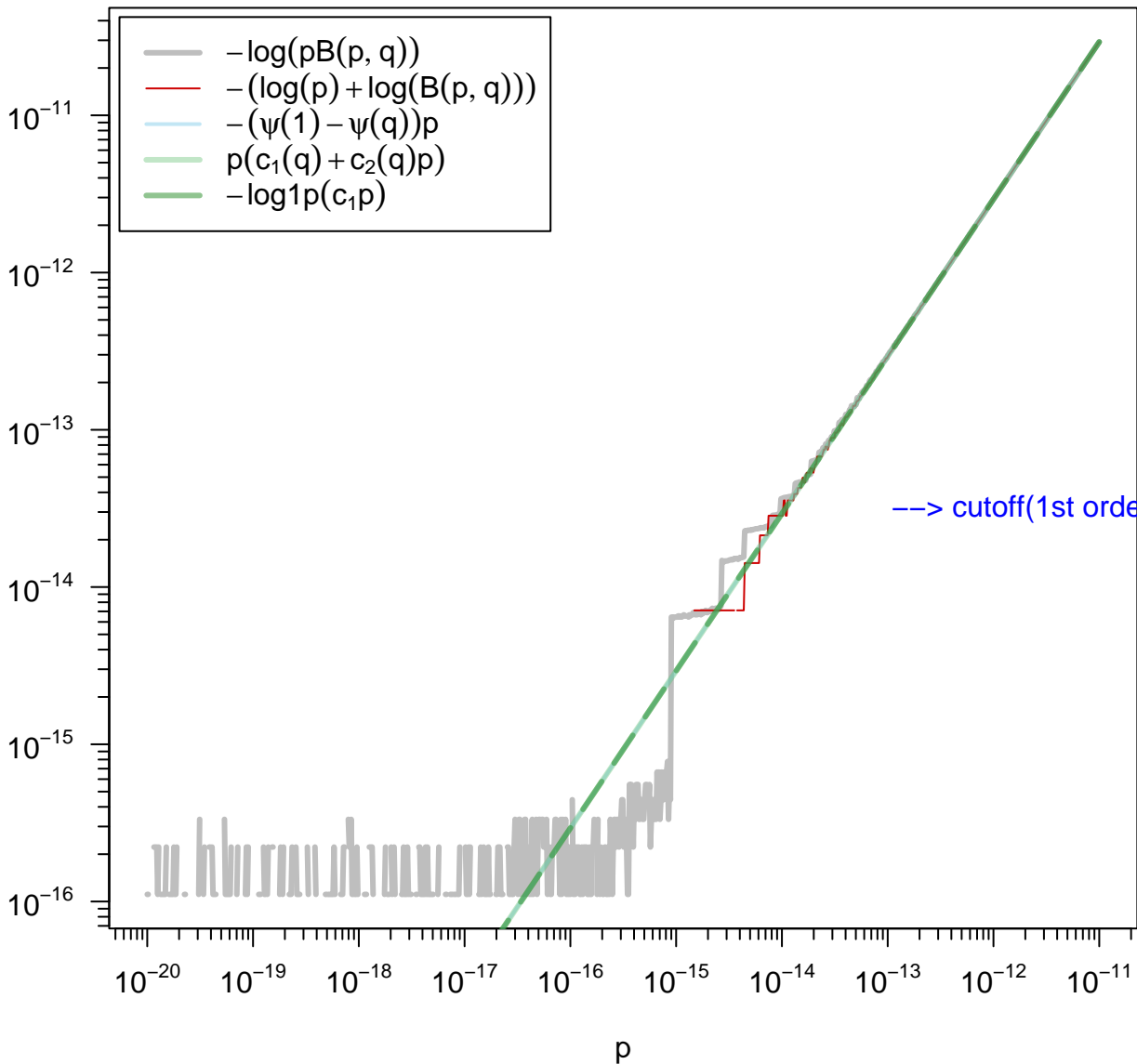
Accurately computing $\log(p \cdot B(p, q))$ for $p \rightarrow 0$, ($q = 1.1$)



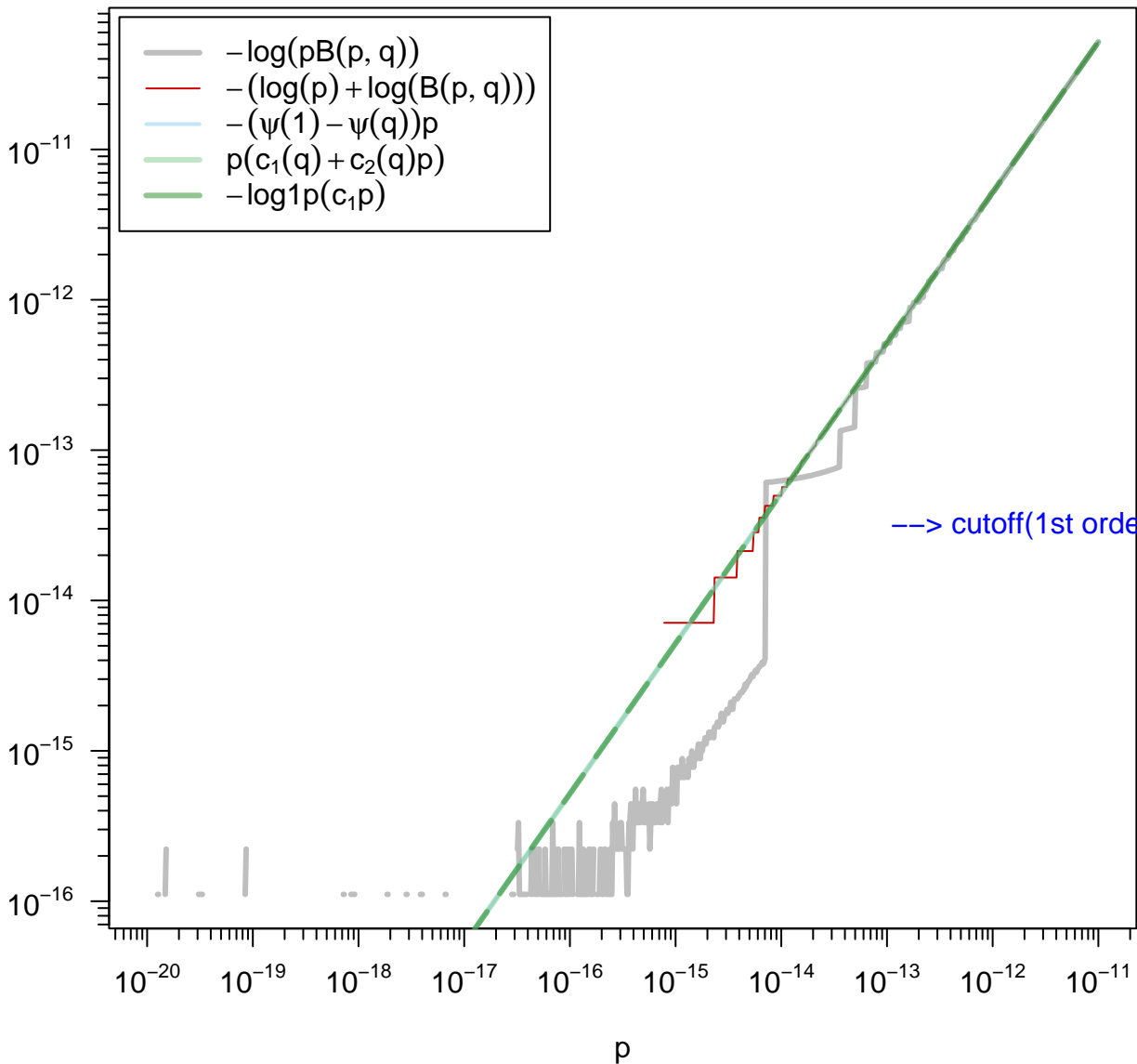
Accurately computing $\log(p \cdot B(p, q))$ for $p \rightarrow 0$, ($q = 1.1$)



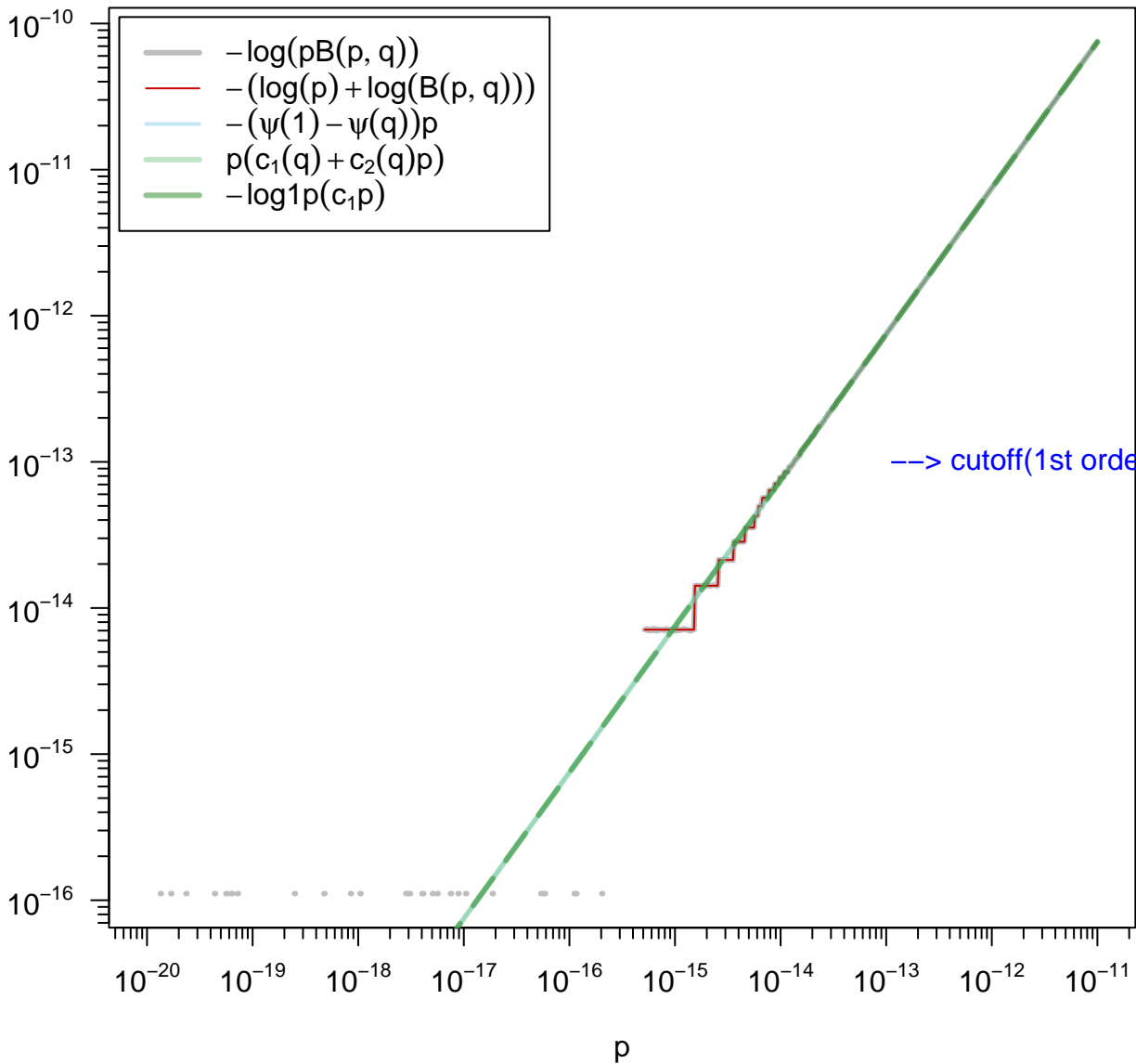
Accurately computing $\log(p \cdot B(p, q))$ for $p \rightarrow 0$, ($q = 11$)



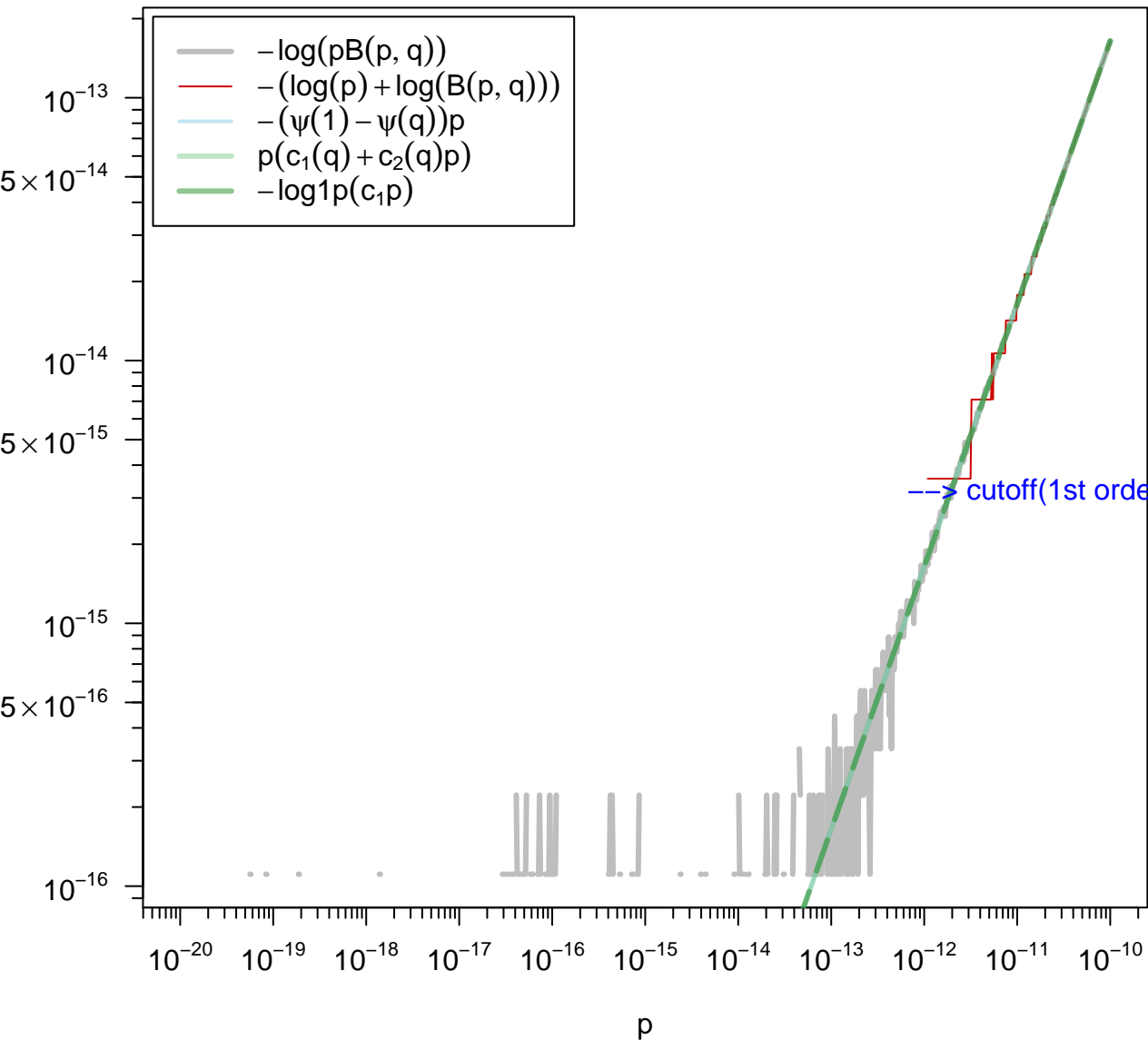
Accurately computing $\log(p \cdot B(p, q))$ for $p \rightarrow 0$, ($q = 101$)



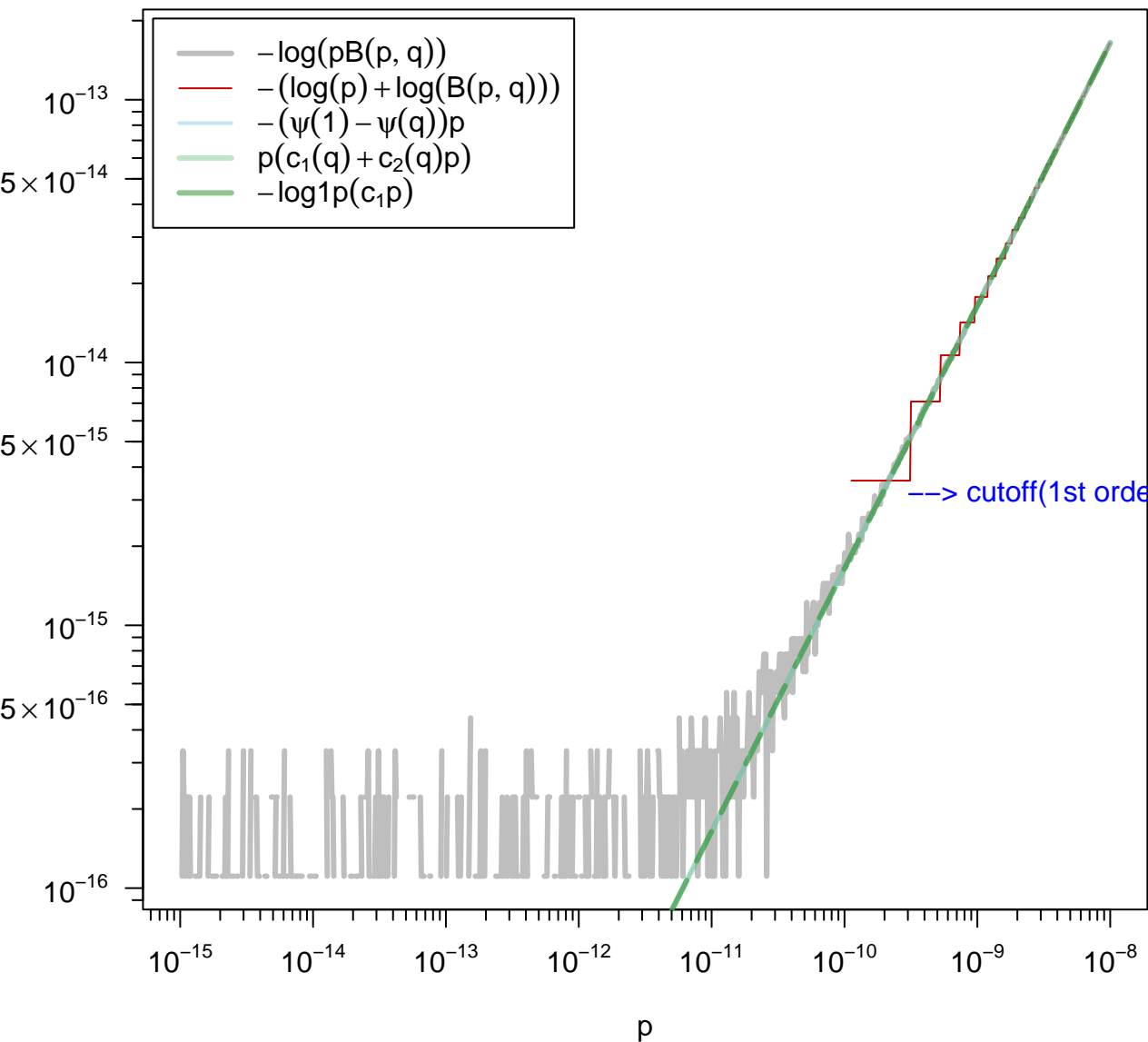
Accurately computing $\log(p \cdot B(p, q))$ for $p \rightarrow 0$, ($q = 1001$)



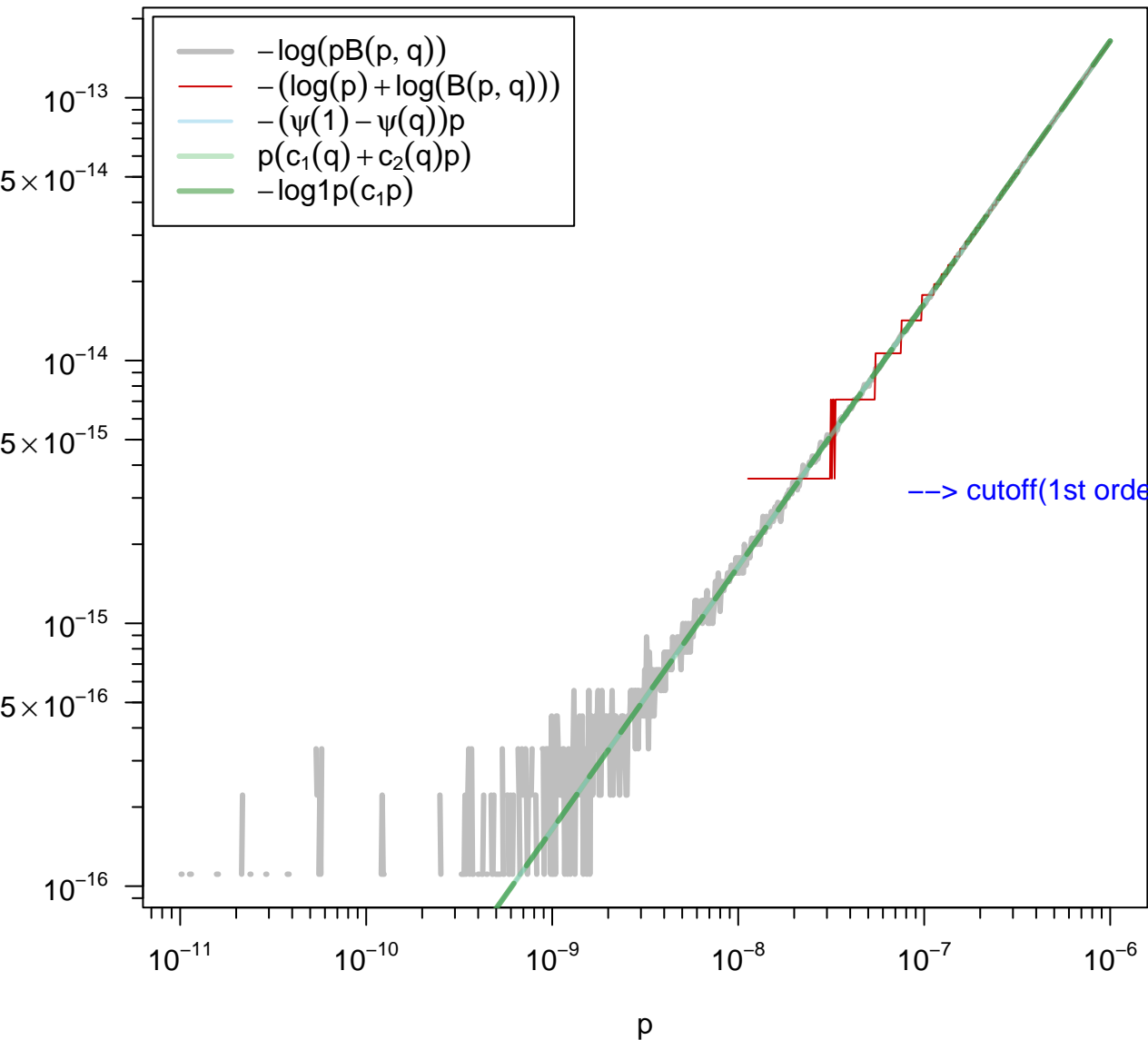
Accurately computing $\log(p \cdot B(p, q))$ for $p \rightarrow 0$, ($q = 1.001$)



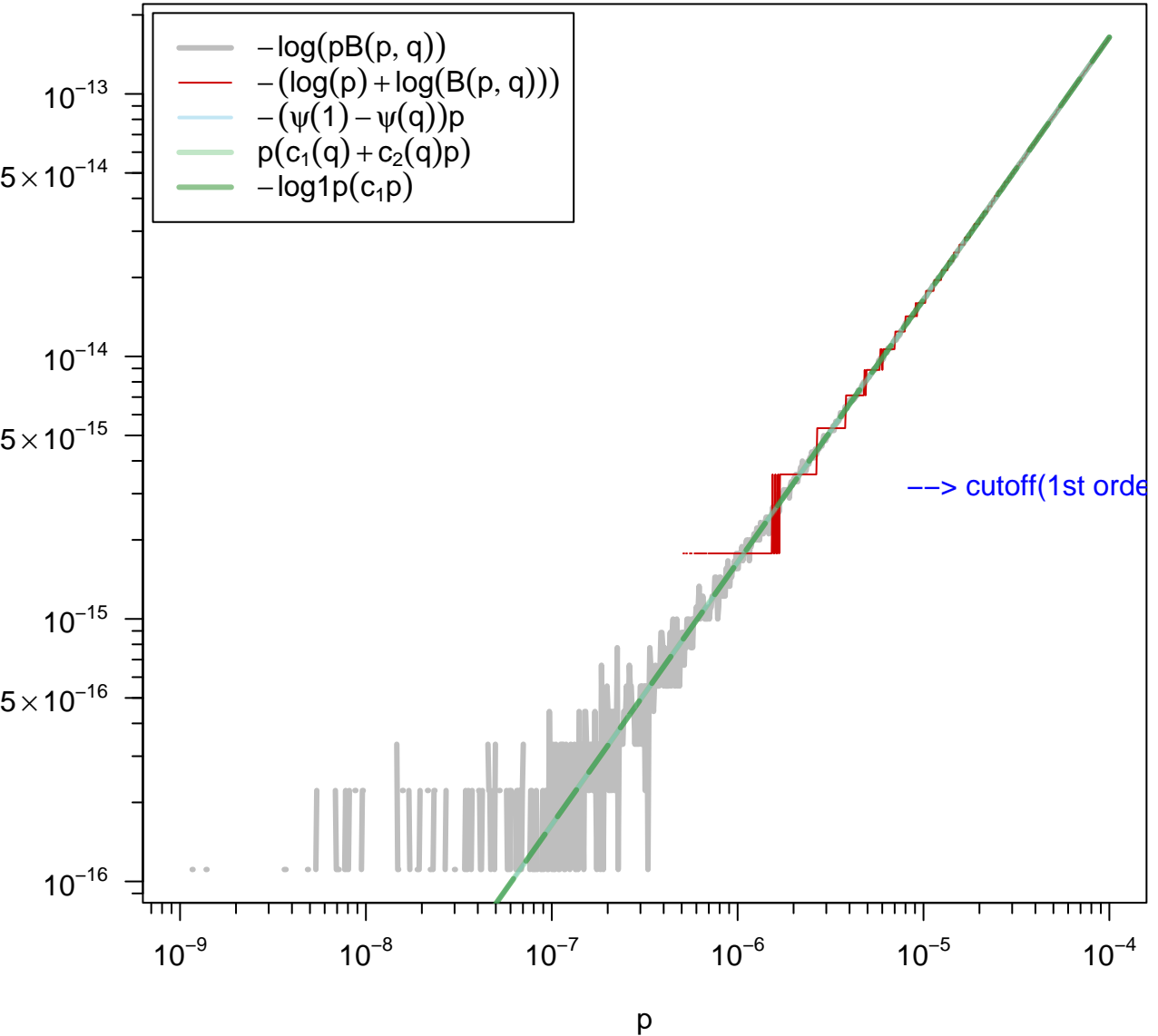
Accurately computing $\log(p \cdot B(p, q))$ for $p \rightarrow 0$, ($q = 1.00001$)



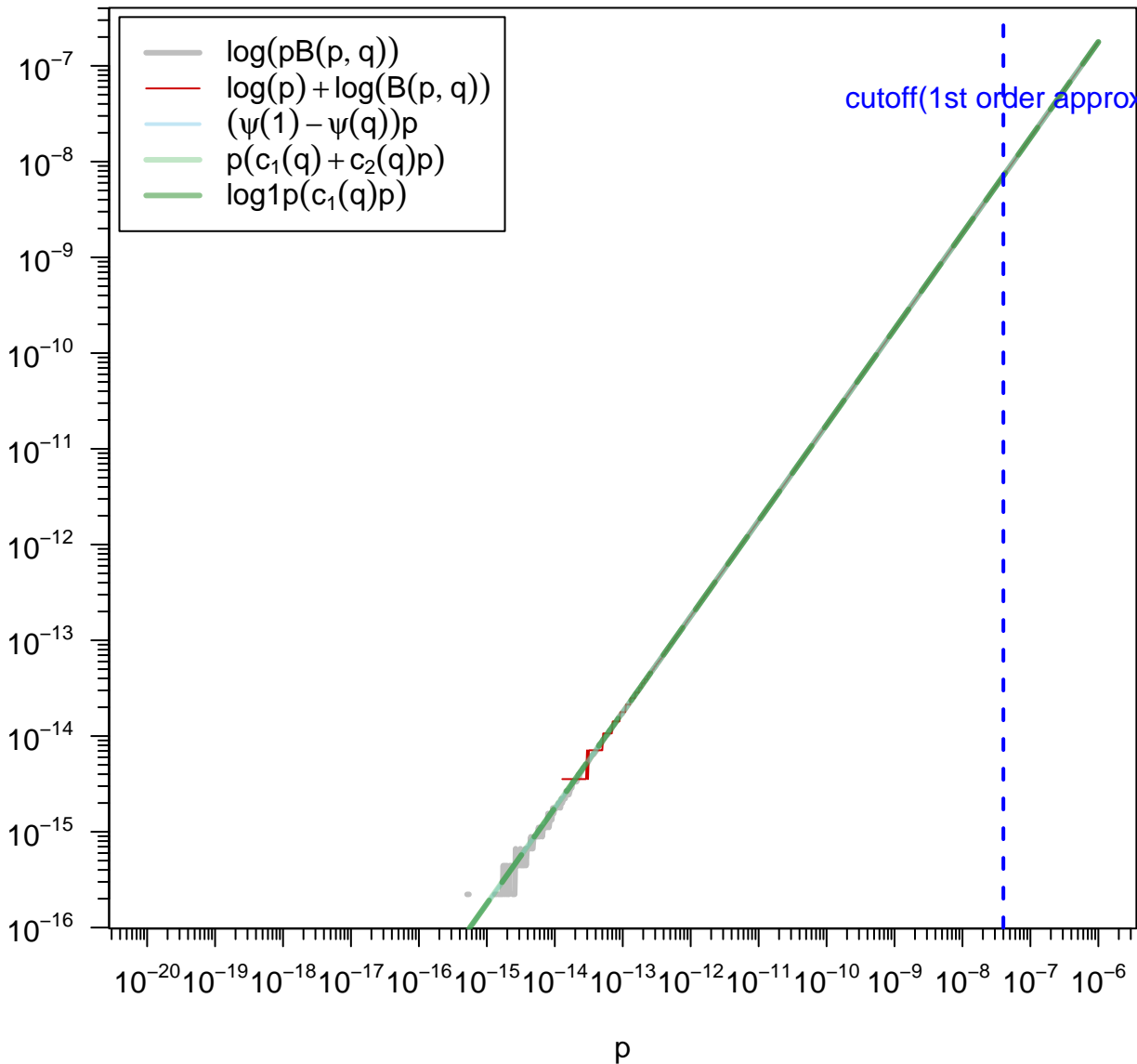
Accurately computing $\log(p \cdot B(p, q))$ for $p \rightarrow 0$, ($q = 1.0000001$)



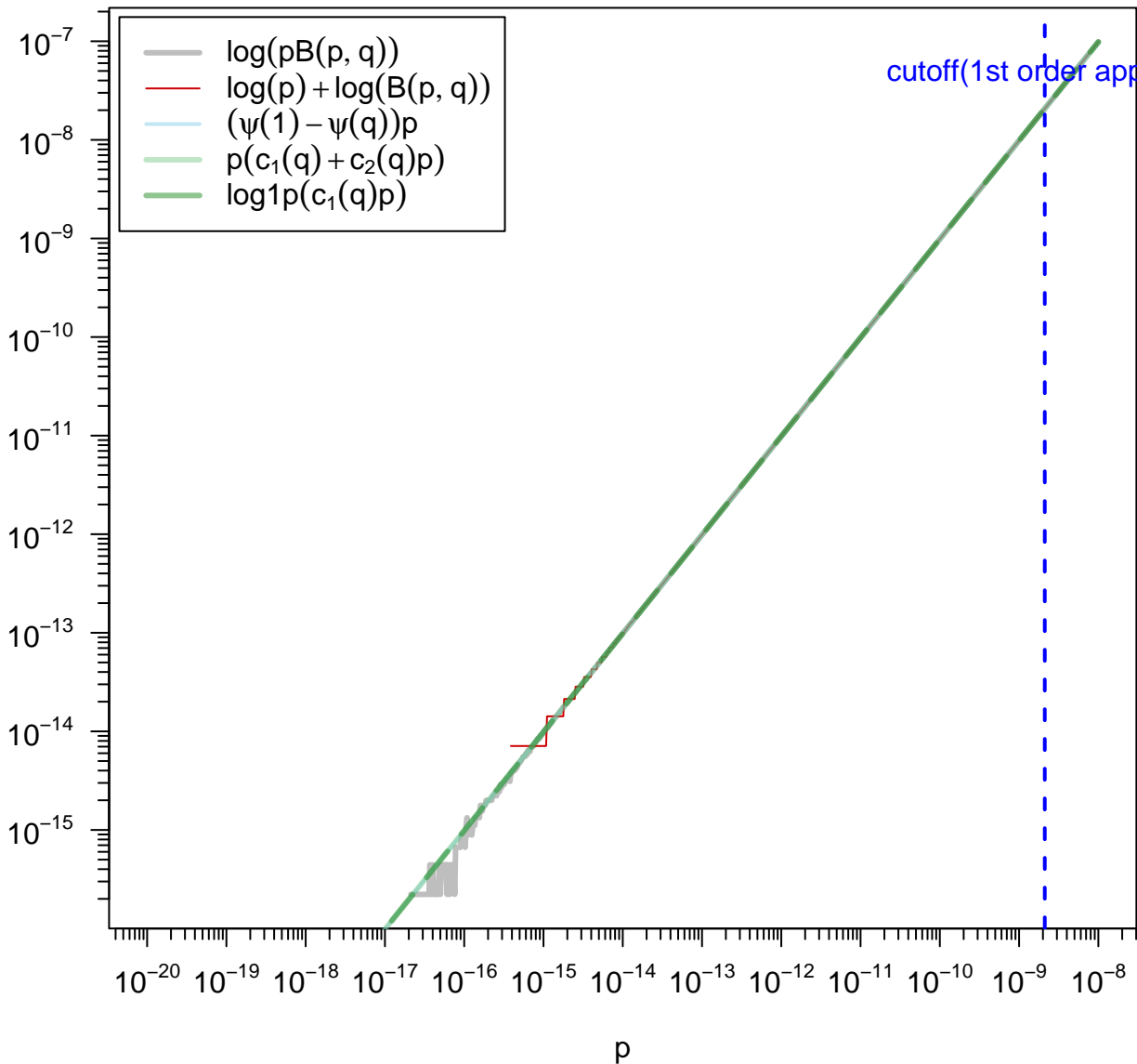
Accurately computing $\log(p \cdot B(p, q))$ for $p \rightarrow 0$, ($q = 1.000000001$)



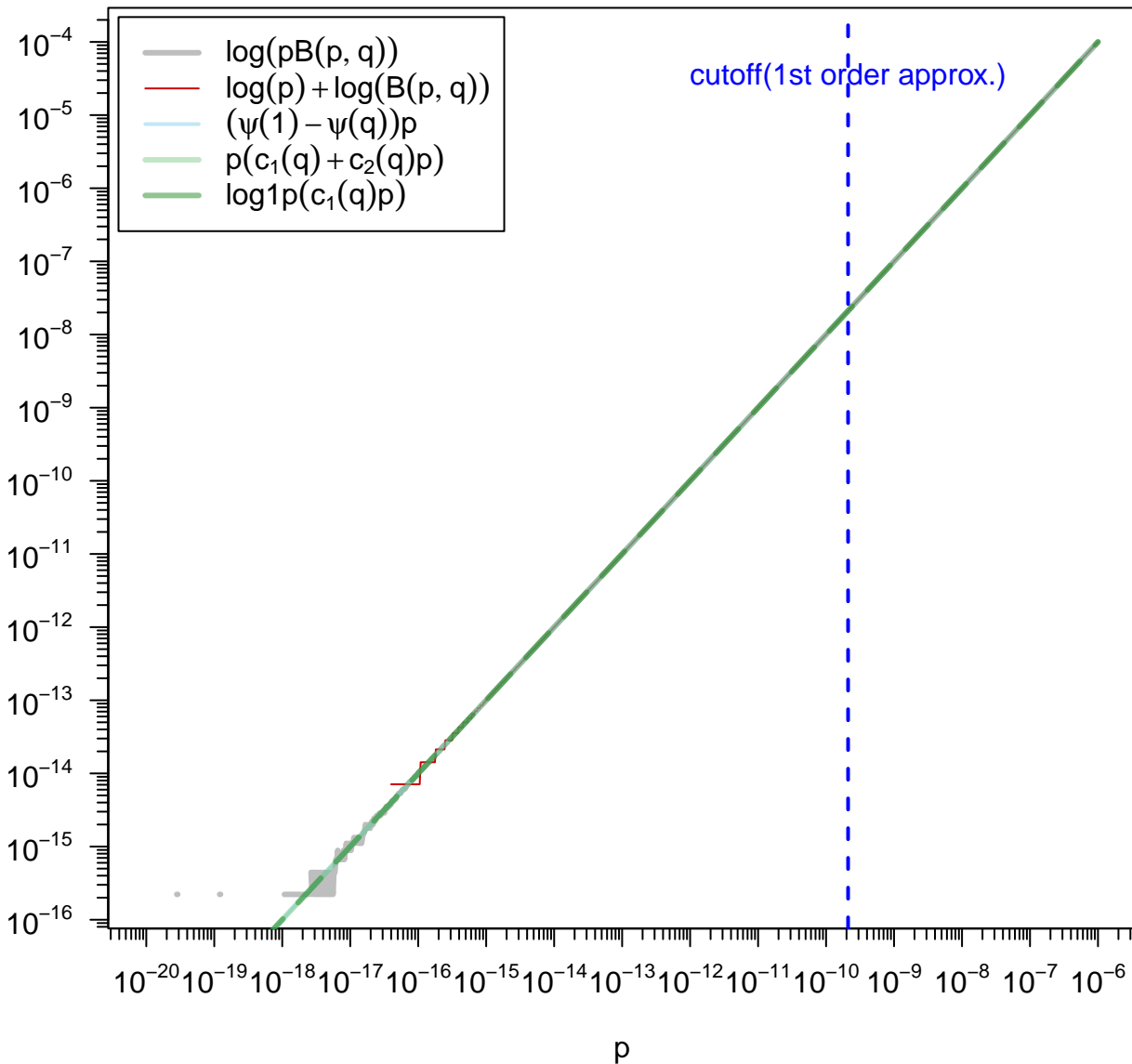
Accurately computing $\log(p \cdot B(p, q))$ for $p \rightarrow 0$, ($q = 0.9$)



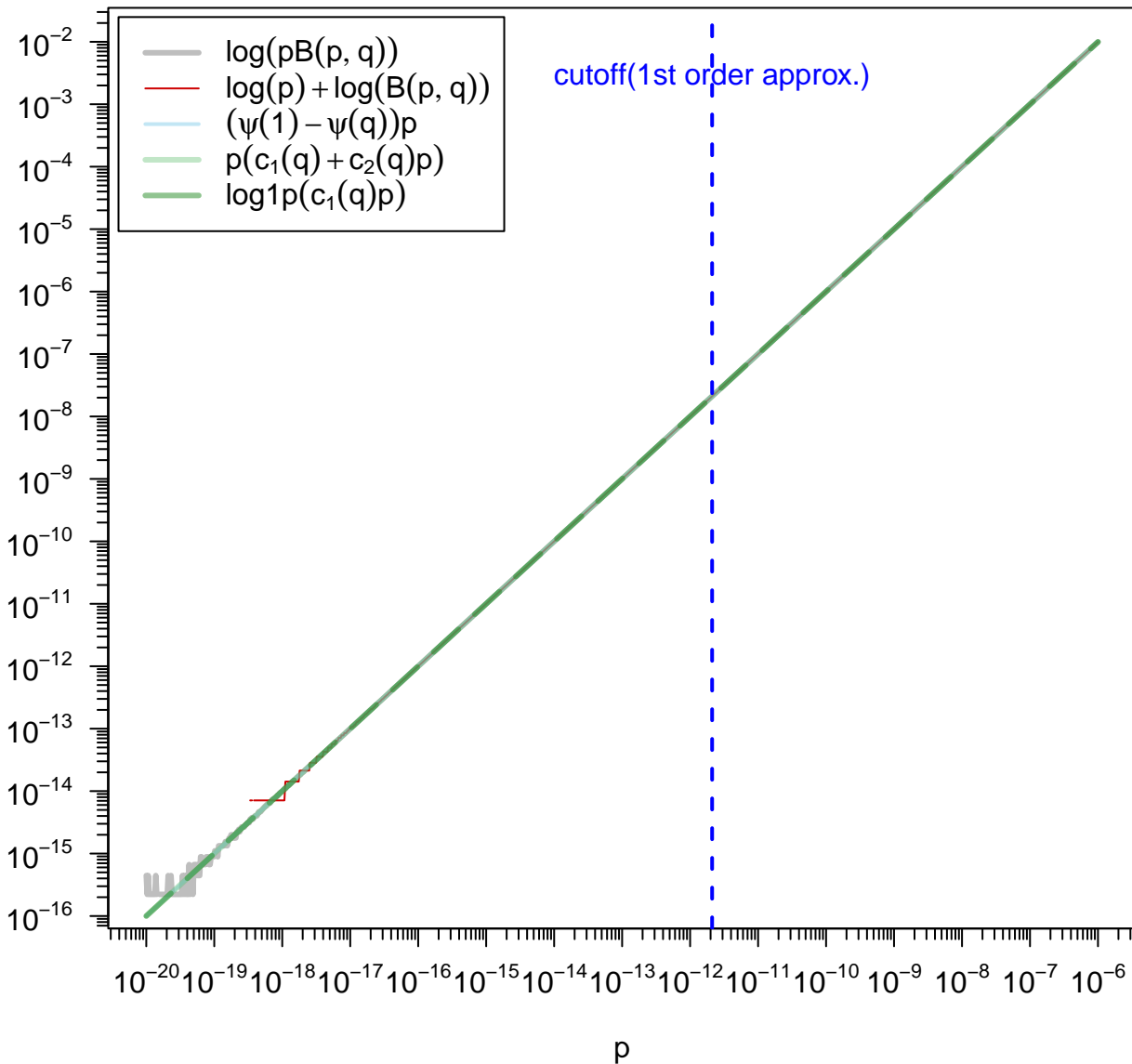
Accurately computing $\log(p \cdot B(p, q))$ for $p \rightarrow 0$, ($q = 0.1$)



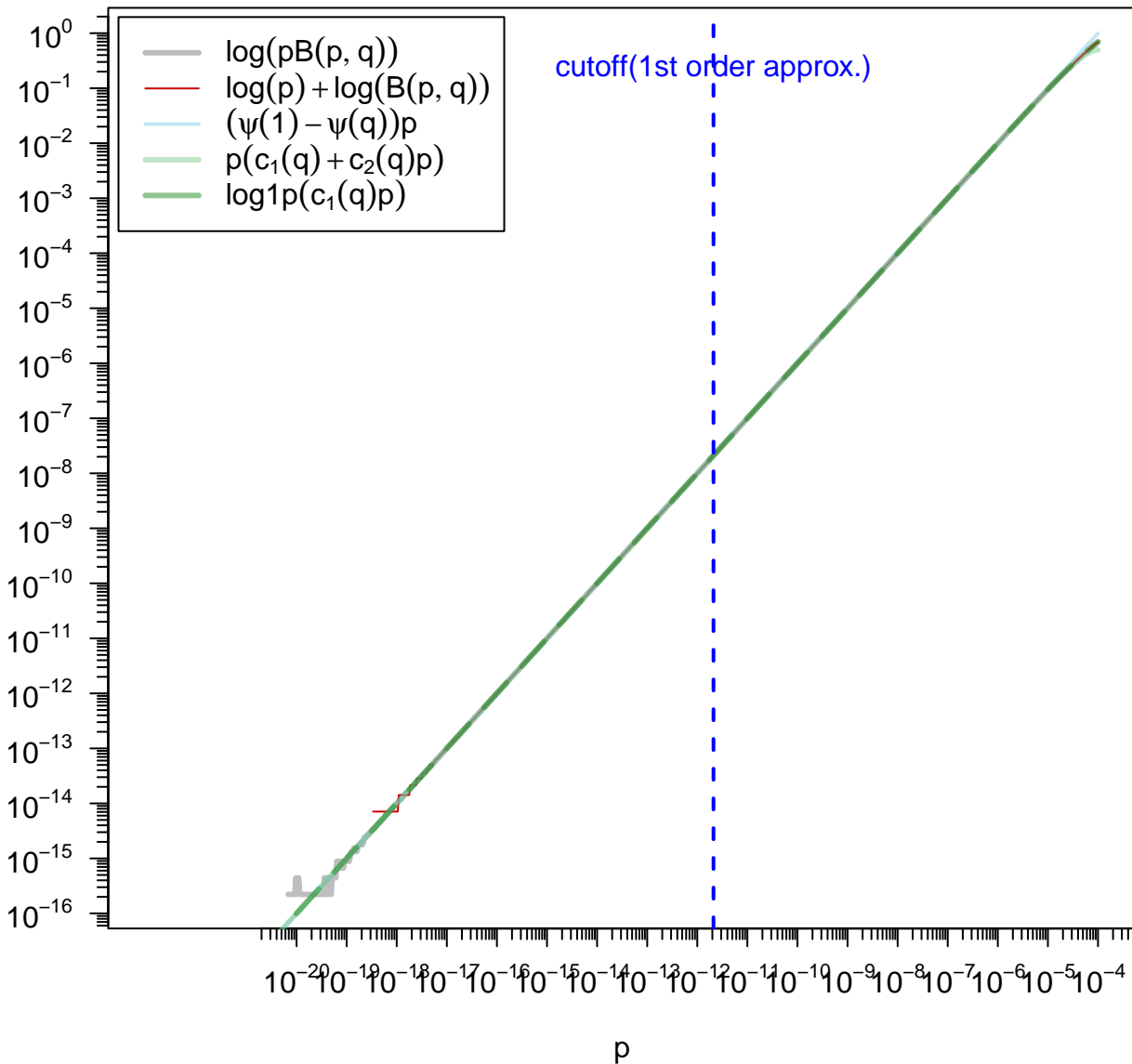
Accurately computing $\log(p \cdot B(p, q))$ for $p \rightarrow 0$, ($q = 0.01$)



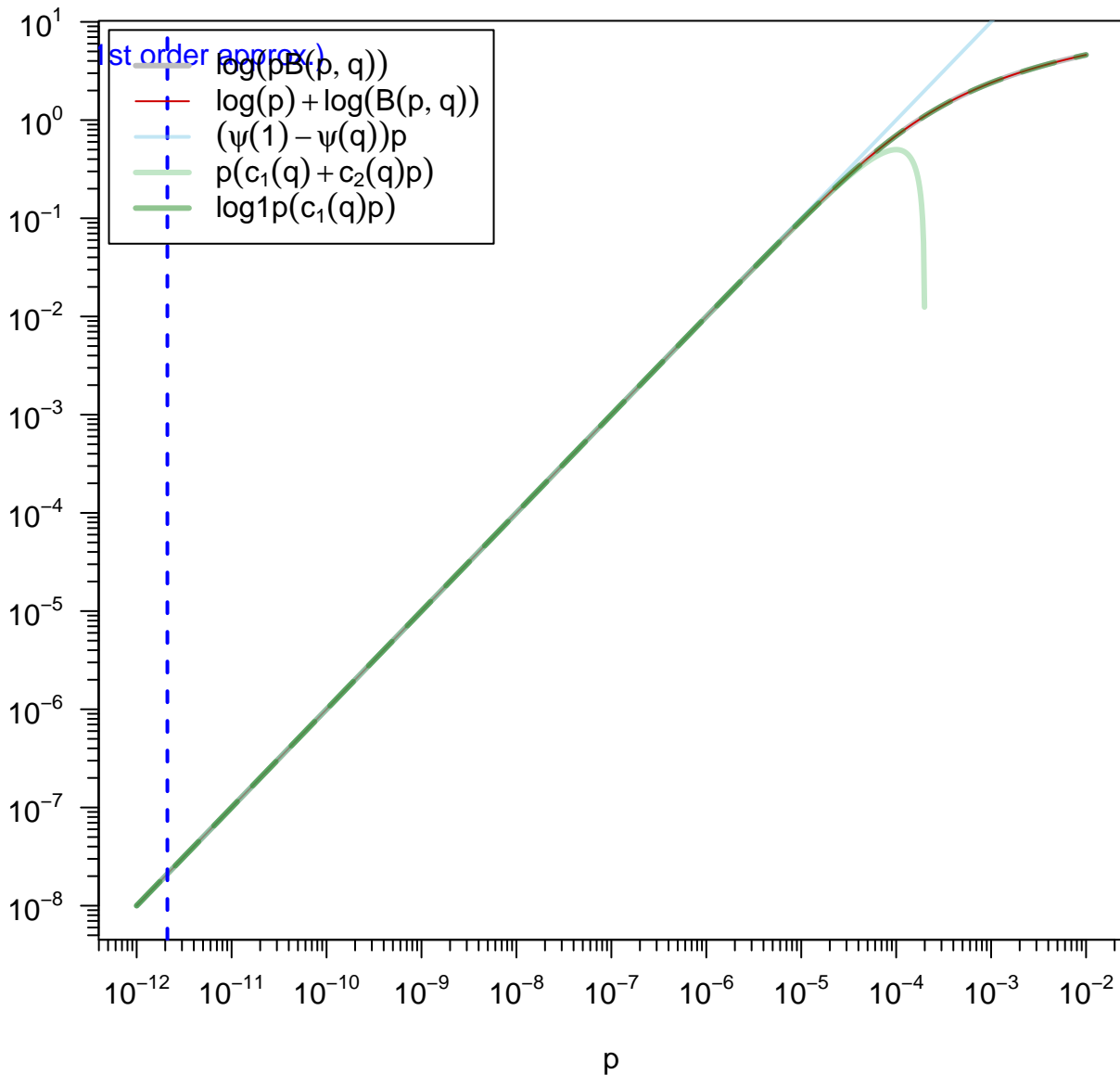
Accurately computing $\log(p \cdot B(p, q))$ for $p \rightarrow 0$, ($q = 1e-04$)



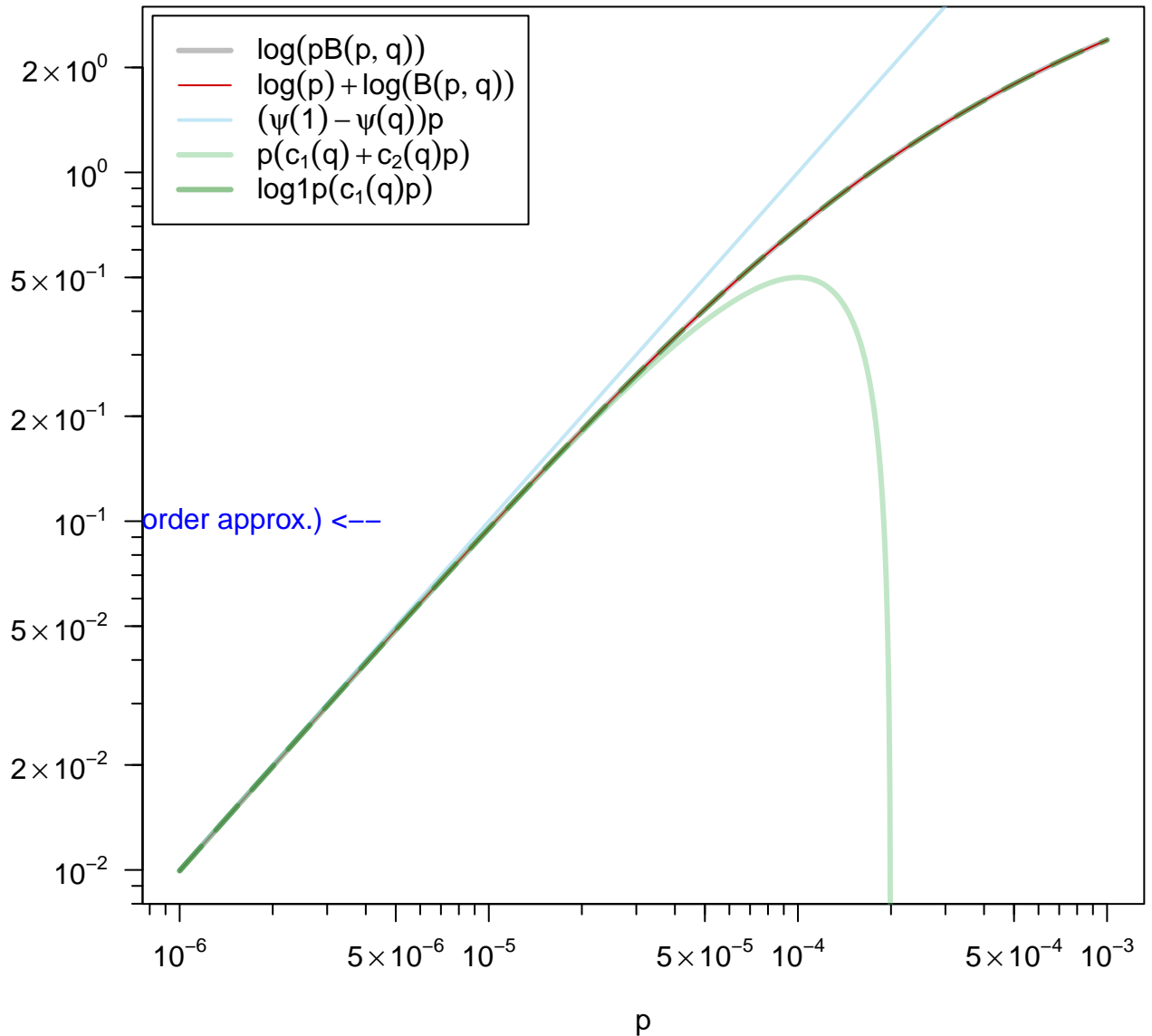
Accurately computing $\log(p \cdot B(p, q))$ for $p \rightarrow 0$, ($q = 1e-04$)



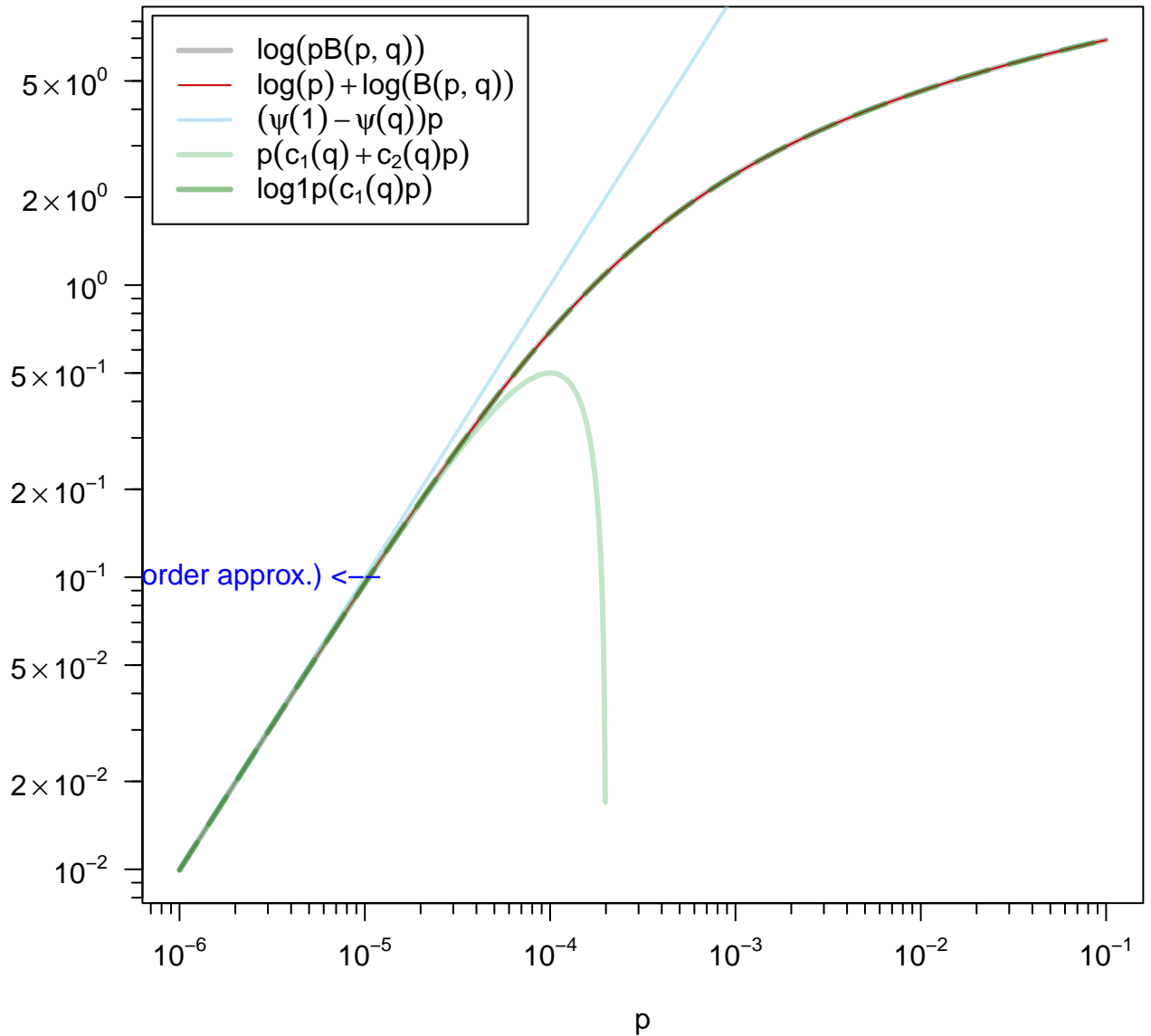
Accurately computing $\log(p \cdot B(p, q))$ for $p \rightarrow 0$, ($q = 1e-04$)



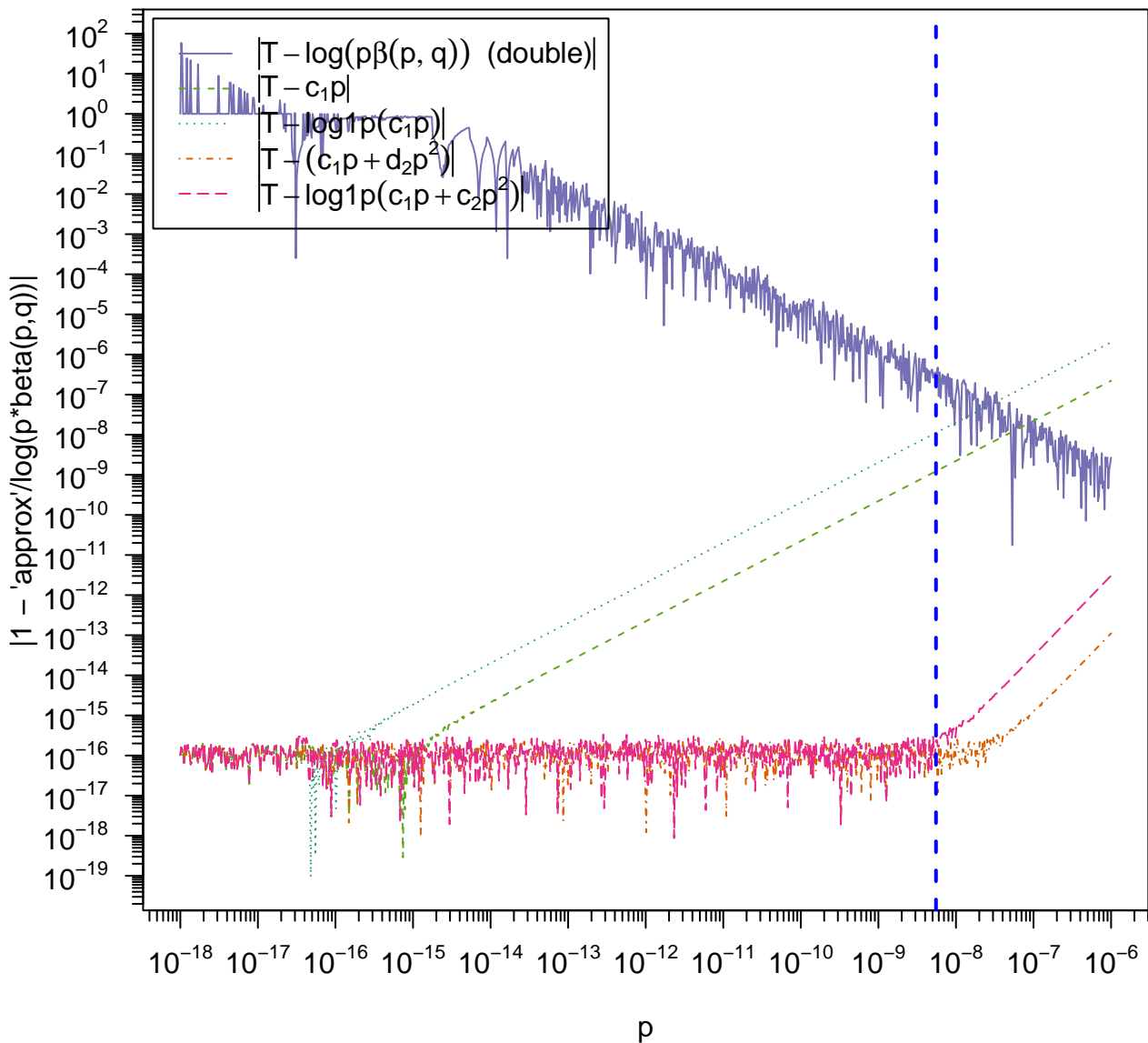
Accurately computing $\log(p \cdot B(p, q))$ for $p \rightarrow 0$, ($q = 1e-04$)



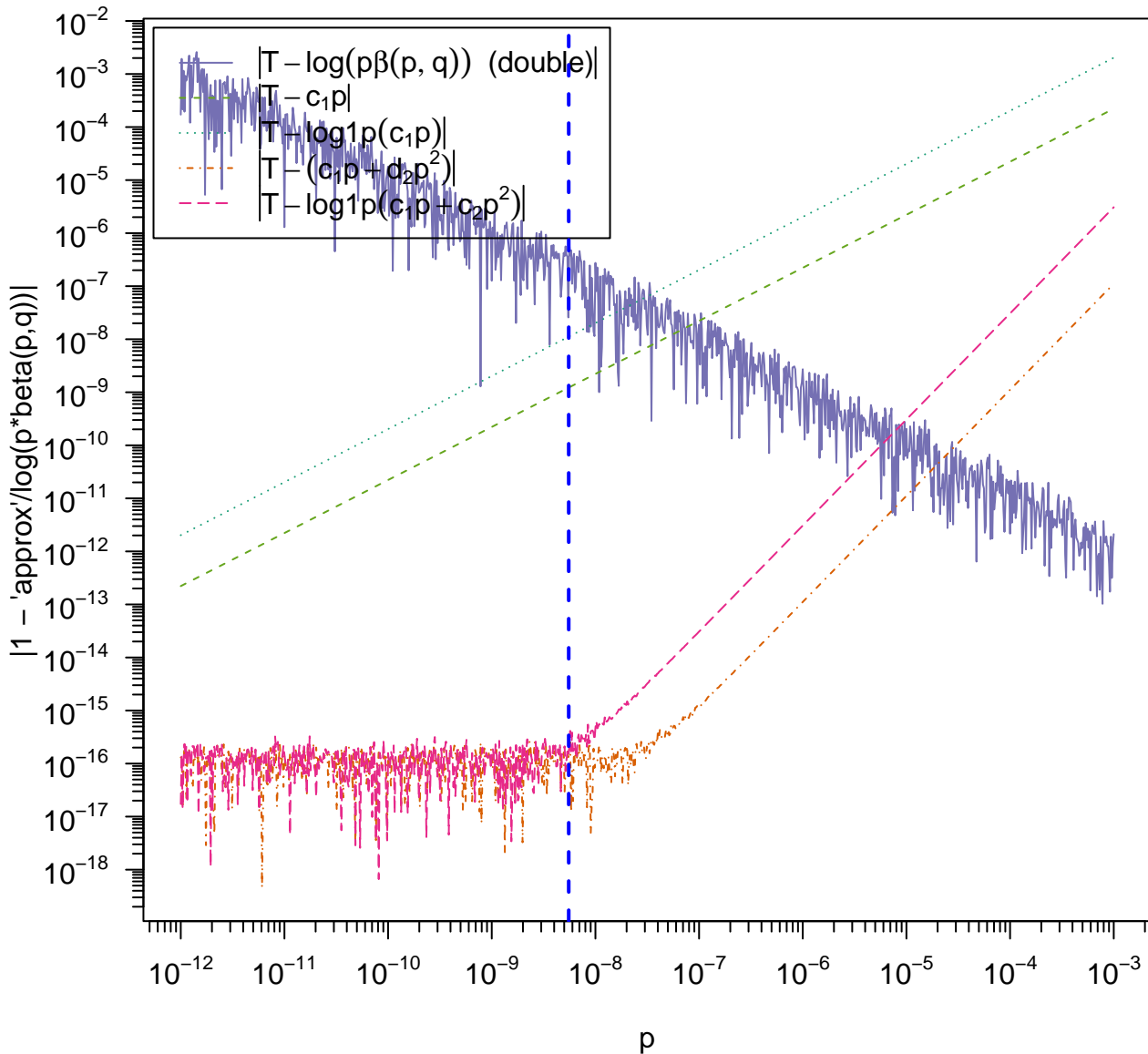
Accurately computing $\log(p \cdot B(p, q))$ for $p \rightarrow 0$, ($q = 1e-04$)



$\log(p \cdot \beta(p, q))$ RELATIVE approx. errors, $q = 21$



$\log(p \cdot \beta(p, q))$ RELATIVE approx. errors, $q = 21$



$\Gamma(x)$ 