

Quest 1: In each of the following, make x the subject & solve.

(i) $\log_3 x = 2$

(ii) $\log_2 (3x-4) = 3$

(iii) $\log_{10} (x+1) = 2$

(iv) $10^x = 30$

(v) $10^{2x-5} = 123$

(vi) $e^x = 17$

* (vii) $4e^{x-3} = 12$

(viii) $\log_4 (x+1) = 2.6$

(ix) $5^x = 18$

(x) $3^{2x-1} = 75$

(xi) $5 \log_{10} x = 14$

(xii) $\log_e (5x+1) = 4.5$

Q. 10(2) Without the use of calculators! } Use the "LOG LAWS" to...
} Simplify the following.

(a) $\log 6 + \log 5 = \log ?$ (b) $\log 20 - \log 5 = \log ...?$

(c) $\log_{10} 2 + \log_{10} 50 =$ (d) $3 \log 5 + 4 \log 5 =$
=

(e) $\log x^4 - \log x =$ (f) $\log x^2 + \log x^3 =$

* (g) $3 \log m + \log m^3 =$

Qu 1(1) (1) 9 (2) 4 (3) 99 (4) 1.477 (5) 3.545 (6) 2.833 (7) 4.099 (8) 37.76 (9) 1.796

(10) 2.465 (11) 630.96 (12) 17.8 Qu 2(1) (a) $\log 30$ (b) $\log 4$ (c) 2 (d) $7 \log 5$ (e) $\log x^3$

(f) $\log x^5$ or $5 \log x$ (g) $\log m^5$ or $5 \log m$

or $3 \log x$