

Crack the Code

Solving Equations with Logarithms

A	Solve $3^x = 200$ $x = 4.82$	B	Solve $\log_5 x = 2.5$ $x = 55.90$
C	Solve $\log_8(x - 2) = 1.2$ $x = 14.13$	D	Solve $2^{3x+1} = 345$ $x = 2.48$
E	Solve $\log_5 x + \log_5 6 = 2$ $x = 4.17$	F	Solve $\log_{10}(x + 1) + \log_{10} 8 = \log_{10} 50$ $x = 5.25$
G	Solve $2 \log_3 x - \log_3 5 = \log_3 40$ $x = 14.14$	H	Solve $2 \log_4 x = \log_4(x - 1) + 1$ $x = 2$
I	Solve $3^{2x} - 5 \times 3^x + 4 = 0$ $x = 1.26 \text{ or } x = 0$	J	Solve $4^{x+1} = 4^{2x} + 3$ $x = 0.79 \text{ or } x = 0$
K	Solve $6^x = 2^{2x-1}$ $x = -1.71$	L	Solve $8^{1-x} = 5^{3x+2}$ $x = -0.17$

Solve all equations to 2 decimal places. To get the three-digit code, add all your answers together then round to the nearest integer. **103**