

QUIZ Review – Solving equations

KEY

Solve each equation. Round all decimals to 3 places.

1. $5^x = 75$

$x = 2.683$

2. $e^x = 22$

$x = \ln(22) = 3.091$

3. $\ln(x+1) = 5$

$x = e^5 - 1 = 147.413$

4. $\log_3(2x-1) = 4$

$x = 41$

5. $\log(x+21) + \log x = 2$

$x = 4$ ($x = -25$ doesn't work – extraneous soln)

6. $15^{2x-3} = 245$

$x = 2.516$

7. $2\ln x + 3\ln 2 = 5$

$x = 4.307$

8. $e^{-x-2} = 50$

$x = -5.912$

9. $\ln(3x+7) = \ln(5x-3)$

$x = 5$

10. $\frac{1}{5}(3)^{x+1} - 2 = 5$

$x = 2.236$