

Solve.

1. $6^x = 17$

$$x = 1.58$$

2. $2^{3x} = 4^{x+2}$

$$x = 4$$

3. $\log_5(x^2 + 9) = 2$

$$x = \pm 4$$

4. $\log(3x - 5) + \log x = \log 2$

$$x = 2$$

5. $4^{2x-5} = 27$

$$x = 3.69$$

6. $25^{2x} = 125^{x+2}$

$$x = 6$$

7. $\log_8(x + 10) - \log_8(x - 1) = \log_8 12$

$$x = 2$$

8. $82 = 3^{x-4}$

$$x = 8.01$$

$$9. 5^{x^2-3} = 72$$

$$x = \pm 2.38$$

$$10. \log_2 x + 2\log_2 5 = 0$$

$$x = \frac{1}{25}$$

$$11. \log_6 4 + 2\log_6 x = 2$$

$$x = 3$$

$$12. 2^{3x+1} = 5^x$$

$$x = -1.47$$

$$13. 7^{2x+3} = 8^{x+4}$$

$$x = 1.37$$

$$14. \log_7 x + 2\log_7 x - \log_7 3 = \log_7 72$$

$$x = 6$$

$$* \log_3(\sqrt{-7x+1}) - 7 = -4$$

$$x = -104$$