

## Logaritme oefening 1 Antwoorden

1  ${}^3\log x = 4,1$  dan  $x = 3^{4,1} = 90,406$

2  $7^t = 100$  dan  $t = {}^7\log 100 = 2,3666$

3  ${}^2\log x + {}^2\log(3x - 5) = 3$   $x(3x-5) = 9$   $x = 2,755$

4  ${}^2\log x = 8$   $x = 256$

5  ${}^3\log x = 2 - {}^3\log 5$   ${}^3\log x = {}^3\log 9 - {}^3\log 5 = {}^3\log \frac{9}{5}$   $x = 1,8$

6  ${}^3\log x = {}^2\log 8$   ${}^3\log x = 3 \Rightarrow x = 3^3 = 27$

7  $5^x = 7^{x+2}$   $7^{x \cdot {}^7\log 5} = 7^{x+2} \Rightarrow x \cdot {}^7\log 5 = x+2 \Rightarrow x({}^7\log 5 - 1) = 2$   $x = -11,5665$

8  $5^x = 3$   $x = {}^5\log 3 = 0,683$

9  ${}^5\log x = 10$   $x = 5^{10} = 9765625$

10  ${}^x\log 5 = 3$   $x = 5^{1/3} = 1,710$

11  $35^{2x} = 500$   $x = \frac{1}{2} \cdot {}^{35}\log 500 = 0,874$

12  ${}^7\log(3+x) = 2$   $x = 7^2 - 3 = 46$

13  $\log 5 + \log x = \log 15$   $5x=15$   $x=3$

14  $\log x = 2$   $x=100$

15  $\log 2x + \log(x-3) = \log 20$   $2x(x-3)=20$   $x=5$

16  $x^{5\log 7} = 7$   $x=5$

17  ${}^2\log x = 8$   $x = 2^8 = 256$

18  ${}^3\log x = 2 - {}^3\log 5$   $x = 9/5 = 1,8$

19  ${}^3\log x = {}^2\log 8$   $x = 3^3 = 27$

20  $5^x = 7^{x+2}$   $x \cdot {}^7\log 5 = x+2$   $x = -11,567$