

Chapter 9 sec 1 - 5

1) Solve the equation: $2(8)^{x-3} = 24$

2) Expand the logarithms as separate simpler logarithms with on exponents:

$$\log_2\left(\frac{4a^5b^2}{c^3}\right)$$

3) Write the logarithms as a single logarithm with a coefficient of 1:

$$\log_5 7 + \frac{1}{2}\log_5 x + \frac{1}{2}\log_5 y$$

4) Rewrite into exponential form: $\log_2\left(\frac{1}{64}\right) = -5$

5) Rewrite into logarithm form: $4^6 = 4096$

6) Approximate the answer to three decimal places: $\log_9 0.68$

7) Compose the two functions then determine if they are inverses.

$$f(x) = \frac{1}{7}x + 21 \qquad h(x) = 7x + 3$$

Answers:

1) 4.195 approximate

3) $\log_5(7\sqrt{xy})$

5) $\log_4 4096 = 6$

$$\log 4 + 5\log a + 2\log b - 3\log c$$

~~2) $\log_2 4 + 2\log_2 b - 3\log_2 c$~~

4) $2^{-5} = \frac{1}{64}$

6) - 0.176