

**Business PreCalculus**    MATH 1643 Section 004, Spring 2014  
**Answer key: Worksheet 26**

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**1-** Answers:

**a.**  $\ln x + \ln(x^3 + 1) - 2 \ln(x - 1)$ .

**b.**  $\frac{1}{2} \log_3(x^2 + 1) - \log_3(x + 3)$ .

**2-** Answers:

**a.**  $\log \frac{\sqrt{xz}}{y}$ .

**b.**  $\ln \frac{x^2 z^4}{y^3}$ .

**3-** Answers:

**a.** False, because  $\log(x \cdot 2) = \log x + \log 2$ .

**b.** False, because  $\log \frac{x}{4} = \log x - \log 4$ .

**c.** False, because  $\log_2 3x = \log_2 3 + \log_2 x$ .

**4-** Answers:

**a.**  $x = \frac{5}{2}$ .

**b.**  $x = e + 1$ .

**5-** Answers:

**a.**  $4 \log 3$ .

**b.** 0.