VD unit 3 topic 2 part 1

Evaluate the following expressions:

| $\left(\log_{\frac{1}{\sqrt{5}}} 625\right) + \log_{32} 2 = -\frac{39}{5}$ | $ \left(\log_{\frac{1}{11}} 121 \right) + \ln e^2 = 0 $ |
|---|---|
| $3. \left(\log_{49} \frac{7}{\sqrt{7}}\right) - \ln\left(\frac{1}{e}\right) = \frac{5}{4}$ | 4. $\left(\log_{12} 12\sqrt{12}\right) + \left(\log_{216} \frac{1}{\sqrt{6}}\right) = \frac{4}{3}$ |
| $5. \log_3 243 - \left(\log_{27} \frac{1}{81}\right) = \frac{19}{3}$ | 6. $\left(\log_{196} \frac{1}{\sqrt{14}}\right) - \left(\log_{128} \frac{1}{64}\right) = \frac{17}{28}$ |
| $7. \left(\log_4 \frac{1}{2}\right) + \left(\log_{\frac{1}{\sqrt{17}}} 289\right) = -\frac{9}{2}$ | $8. \left(\log_{\sqrt{2}} \frac{1}{2}\right) - \log_{729} 3 = -\frac{13}{6}$ |