

Practice Exam 3

- Solve for x , evaluate, or write in exponential form.
 - $\log_{10} 0.01 = -100$
 - $\log_8 128$
 - $\log_3(x - 2) = 2$
 - $\log_2(x^2 - 6x + 10) = 1$
- State the domain and range and sketch the graph of $y = \log_3(x - 10)$.
- Given that $\log x = 2$, $\log y = 3$, $\log 2 \approx 0.3$ and $\log 3 \approx 0.48$, evaluate $\log \sqrt[5]{x^6 \cdot y^4}$.
- Find the exact value of $\csc(-\frac{\pi}{2})$ and $\sin(60^\circ)\csc(45^\circ)$.
- If $\cos \theta = -\frac{7}{25}$ and θ is in Quadrant III, find the other five function values of θ .
- Sketch the graph of $y = -10 \sin \left[\frac{1}{4} \left(x + \frac{\pi}{4} \right) \right]$ over two periods. Also, state the amplitude, period, and phase shift of the function.
- Graph the function $y = 7 \tan\left(\frac{x}{4}\right)$ over three periods.
- Graph the function $y = \sec(x + \pi)$ over three periods.
- Find the exact value of $y = \sin^{-1} \left(-\frac{3\sqrt{2}}{6} \right)$ and $\tan^{-1}(-1)$.
- Find the exact value of $\cos \left(\tan^{-1} \frac{11}{3} \right)$.