

Name:.....Serial#:.....Sec #:.....

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**Q.1:** Find the period, amplitude, phase shift and vertical shift of  $y = 3 - 2 \cos\left(3\pi x - \frac{3}{2}\right)$

**Q.2:** Find Vertical Asymptotes, Zeros, Period phase shift and vertical shift of the graph of  $y = 4 \cot\left(\frac{2x}{3} - \frac{1}{2}\right) - 3$ .

**Q.3:** Verify the Identity  $\frac{\csc x + \cot x}{\csc x - \cot x} = \csc^2 x + 2 \csc x \cot x + \cot^2 x$ .