

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

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**Q.1:** Verify the identity  $\cos(3x) = 4 \cos^3(x) - 3 \cos(x)$

**Q.2:** If  $\cos(x) = -\frac{3}{5}$ ,  $x$  in Quadrant III and  $\sin(y) = \frac{5}{13}$ ,  $y$  in Quadrant II, find the value of  $\cos(x + y)$ .

**Q.3:** If  $\sin(x) = -\frac{3}{5}$ ,  $x$  in Quadrant IV, find the value of  $\cos\left(\frac{x}{2}\right)$ .