

### Explanation

Let

$x = 76\%$  sample mean

$n = 100$

**Sample statistic** is equal to sample mean which is **76%**.

**To solve for the margin of error :**

Let

MOE = MARGIN OF ERROR

$MOE = z\sqrt{x(1-x)/n}$  ; z score for 99% percentile is 2.576

$$= 2.576\sqrt{(0.76(1-0.76))/100}$$

$$= 0.11 \times 100$$

**MOE = 11%**

**To solve for confidence interval :**

Let

CI = confidence interval

$CI = x \pm MOE$

$$= 0.76 \pm 0.11 ; \text{ solve for the upper range}$$

$$= 0.76 + 0.11$$

$$CI = 0.87 \times 100$$

**CI = 87%**

For the lower range ;

$$CI = 0.76 - 0.11$$

$$CI = 0.65 \times 100$$

**CI = 65%**

**The confidence interval can be written as**

**76% $\pm$ 11%**