Answer on Question 37678, Math, Statistics Our degree of freedom is

$$df = 56 - 1 = 55$$

Our α is

$$\alpha = (1 - 0.9)/2 = 0.05$$

For df=55 and $\alpha = 0.05$ we find coefficient from t-distribution table, it is equal to

$$t = 1.67$$

Now, the 90% interval is

$$30.8 \pm t \cdot \frac{\sigma}{\sqrt{N}} = 30.8 \pm 1.67 \cdot \frac{4.5}{\sqrt{56}} \approx 30.8 \pm 1$$