- Sandy invests $10,000 in an account that earns 4.5% compounded quarterly. What is the value of the investment after 3.5 years?

$A = P\left(1 + \frac{r}{n}\right)^{nt}$ $P = 10000$ $r = 0.045$ $n = 4$ $t = 3.5$

$10000\left(1 + \frac{0.045}{4}\right)^{(4 \times 3.5)}$

$\approx \$11,695.51$

- What if interest is compounded continuously?

$A = Pe^{rt}$

$10000e^{0.045 \times 3.5}$

$\approx \$11,705.80$