

Name: ANSWER KEY

Score: _____

Use synthetic division to evaluate $f(x) = 3x^3 - 4x^2 - x + 8$ at $x = -4$.

$$\begin{array}{r|rrrr} -4 & 3 & -4 & -1 & 8 \\ & & -12 & 64 & -252 \\ \hline & 3 & -16 & 63 & \end{array}$$

$$\boxed{-244 = f(-4)} \quad \text{by the factor theorem.}$$