EmSAT Test-1

1- If $f(x) = \frac{6-x}{-2x+1}$, then $f^{-1}(x) = ?$

- ☐ **A.** $\frac{-2x+1}{6-x}$
- ☐ **B.** $\frac{6-x}{-2x+1}$
- ☐ **C.** $\frac{x+3}{2x+1}$
- ☐ **D.** $\frac{-6+x}{-2x+1}$
- ☐ **E.** $\frac{6-x}{2x-1}$

2- What is the ninth term of the geometric sequence whose first term is 6 and whose fourth term is $\frac{16}{9}$?

- ☐ **A.** $\frac{19683}{128}$
- ☐ **B.** $\frac{512}{2187}$
- ☐ **C.** $\frac{2187}{512}$
- ☐ **D.** $\frac{128}{729}$
- ☐ **E.** $\frac{243}{64}$

3- For $x \neq -1$, $\frac{3x^2+2x+3}{x+1} = ?$

- ☐ **A.** $3x+1+\frac{4}{x+1}$
- ☐ **B.** $x-1+\frac{4}{x+1}$
- ☐ **C.** $3x-1+\frac{4}{x+1}$
- ☐ **D.** $3x+3+\frac{4}{x+1}$
- ☐ **E.** $3x-1-\frac{4}{x+1}$