

## 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.  $3x - 1 - \frac{4}{x + 1}$