Quiz 1.15

Name

1. Let f be the function defined by $f(x) = \frac{3^x+2}{e^{2x}+1}$ for $x > 0$. Which of the following is a horizontal asymptote to the graph of f ?

(A) $y = 0$

(B) $y = \frac{3}{e^2}$

(C) $y = 1$

(D) There is no horizontal asymptote to the graph of f.

2. Let f be the function defined by $f(x) = \frac{2^x+5}{e^x+1}$ for $x > 0$. Which of the following is a horizontal asymptote to the graph of f ?

(A) $y = 0$

(B) $y = \frac{2}{e}$

(C) $y = 1$

(D) There is no horizontal asymptote to the graph of f.

3. Let f be the function defined by $f(x) = \frac{1-5x-2x^2}{3x^2+7}$ for $x > 0$. Which of the following is a horizontal asymptote to the graph of f ?

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(A) $y = -\frac{2}{3}$

(B) $y = \frac{1}{3}$

(C) $y = \frac{2}{3}$

(D) There is no horizontal asymptote to the graph of f.