Trig Review Quiz 2 2019-20

_____1. Simplify $(n + 5)^2$ [1-1B]

A. $n^2 + 25$ B. $n^2 + 10$ C. $n^2 + 10n + 25$ D. $n^2 + 10n + 10$

_____2. What is the horizontal asymptote of $y = \frac{4x^3 + 5}{4x^2 + 1}$? [6-3A]

A. y = 0 B. $y = \frac{1}{2}$ C. y = 1 D. No horizontal asymptote

_____ 3. $x + 2\overline{)4x^2 + 15x + 14}$ [2-5A]

A. 4x B. 4x + 7 C. $4x + \frac{4}{x+2}$ D. $4x + 6 + \frac{4}{x+2}$

_____ 4. $\begin{bmatrix} -2 & 5 \end{bmatrix} \bullet \begin{bmatrix} 2 & 1 & 0 \\ -1 & 2 & 3 \end{bmatrix}$ [5-3]

A. $\begin{bmatrix} -1 & -12 & 15 \end{bmatrix}$ B. $\begin{bmatrix} -9 & 8 & 12 \end{bmatrix}$ C. $\begin{bmatrix} -1 & 8 & 12 \end{bmatrix}$ D. $\begin{bmatrix} -9 & 8 & 15 \end{bmatrix}$

_____5. Factor $y^5 + 3y^3 + 4y^2 + 12$ [2-3]

A. $(y^2 + 4)(y^3 + 3)$ B. $(y^2 + 3)(y^3 + 4)$ C. $(y^4 + 3)(y + 4)$ D. $(y + 3)(y^5 + 4)$

_____6. If f(x) = 5x – 2 and g(x) = 2x + 1, what is f(g(x))? [3-2A]

A. 10x – 3 B. 10x – 13 C. 10x + 3 D. 10x – 7

_____7. Which is the equation of the line that goes through (1, 4) and (3, 10)? [4-2]

A. y = 3x – 2 B. y = 3x + 2 C. y = 3x + 10 D. y = 3x + 1

_____8. What is the domain of $f(x) = x^2 - 9$? [3-2B]

A. $x \neq 3$ B. $\mathbb{R}$ C. $x \geq 3$ D. $x > 3$

_____9. Factor $8n^3 + 125$ [2-4]

A. $(2n + 5)(4n^2 + 10n + 25)$ B. $(2n – 5)(4n^2 + 10n + 25)$

C. $(2n + 5)(4n^2 – 10n + 25)$ D. $(2n – 5)(8n^2 + 10n + 25)$

_____10. Solve for n: $4(2n + 5) + 2(3n + 5) = 10n + 22$ [1-1A]

A. n = -4 B. $n = \frac{1}{2}$ C. n = -2 D. n = 2