Trig Review Quiz 23

Name _____

YOU MAY NOT USE THE CALCULATOR TO GRAPH NOR FOR MATRICES!

_____1. Simplify $(n + 5)^2$

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

_____2. What is the domain of $f(x) = \frac{x^3}{x-3}$?

A. $x \neq 3$ B. $x > 3$ C. $x \geq 3$ D. None of the above

_____3. What is the value of y in $\begin{cases} 2x - y = 8 \\ 3x + y = 12 \end{cases}$?

A. y = 0 B. y = 1 C. y = 5 D. None of the above

_____4. What is $\begin{bmatrix} 2 & 3 \\ 2 & 4 \end{bmatrix} \bullet \begin{bmatrix} 3 & -2 \\ -1 & -4 \end{bmatrix}$?

A. $\begin{bmatrix} 3 & -8 \\ 2 & -20 \end{bmatrix}$ B. $\begin{bmatrix} 3 & -16 \\ 2 & -12 \end{bmatrix}$ C. $\begin{bmatrix} 6 & -6 \\ -2 & -16 \end{bmatrix}$ D. None of the above

_____5. What equation is graphed in Figure 1 on the back?

A. $y = (x+1)^2 - 2$ B. $y = (x-1)^2 - 2$ C. $y = (x+1)^2 + 2$ D. $y = (x-1)^2 + 2$

_____ 6. What equation is graphed in Figure 2 on the back?

A. $y = \pm\sqrt{x+1} + 2$ B. $y = \sqrt{x+1} + 2$ C. $y = \pm\sqrt{x-1} - 2$ D. $y = \sqrt{x-1} + 2$

_____7. What equation is graphed in Figure 3 on the back?

A. $y = -\frac{1}{2}|x-1| - 1$ B. $y = \frac{1}{2}|x+1| - 1$ C. $y = -\frac{1}{2}|x+1| - 1$ D. $y = \frac{1}{2}|x-1| + 1$

_____8. What is the vertical asymptote of $y = \frac{2x^3 + 5}{x^2 - 4}$?

A. x = 2 B. x= 4 C. x = ±2 D. No vertical asymptote

_____9. From the 10 shirts I have, I must pick 3 to pack for my vacation. How many different looks would I have on my vacation?

A. 120 B. 540 C. 720 D. 1140

_____10. What is the horizontal asymptote of $y = \frac{2x^3 + 5}{3x^2 + 1}$?

A. y = 0 B. $y = \frac{2}{3}$ C. y = 1 D. No horizontal asymptote

Figure 1

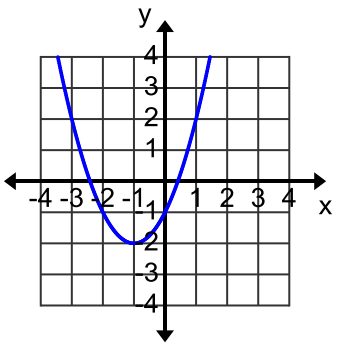

Figure 2

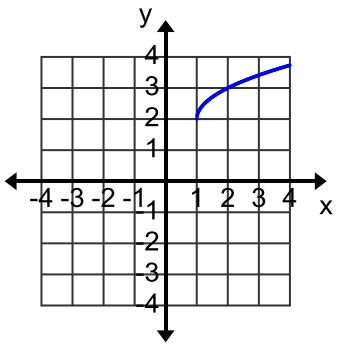

Figure 3