

# Trig Review Quiz 21

Name \_\_\_\_\_

- \_\_\_\_\_1. Simplify  $\left(\frac{2a^3}{5b^2}\right)^{-2}$
- A.  $\frac{25b^4}{4a^6}$       B.  $\frac{4b^4}{25a^6}$       C.  $\frac{25a^6}{4b^4}$       D.  $\frac{25a^6b^4}{4}$
- \_\_\_\_\_2. Factor  $n^3 + 8$
- A.  $(n + 2)(n^2 + 2n + 4)$       B.  $(n + 2)(n^2 - 2n + 4)$   
C.  $(n - 4)(n^2 + 4n + 2)$       D.  $(n + 4)(n^2 - 4n + 2)$
- \_\_\_\_\_3. If  $f(x) = 3x - 10$  and  $g(x) = 2x + 1$ , what is  $f(g(x))$ ?
- A.  $6x - 19$       B.  $6x - 13$       C.  $6x + 13$       D.  $6x - 7$
- \_\_\_\_\_4. 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
- \_\_\_\_\_5. What is the domain of  $f(x) = x^3 - 8$ ?
- A.  $x \neq 2$       B.  $\mathbb{R}$       C.  $x \geq 2$       D.  $x > 2$
- \_\_\_\_\_6. What is the slope from  $(1, 4)$  to  $(3, 10)$ ?
- A. 6      B. 2      C. 3      D. -2
- \_\_\_\_\_7. What is the distance from  $(-3, -2)$  to  $(1, -6)$ ?
- A.  $4\sqrt{2}$       B.  $3\sqrt{2}$       C.  $2\sqrt{3}$       D.  $2\sqrt{2}$
- \_\_\_\_\_8.  $|x - 5| > 9$
- A.  $x > 14$  or  $x < -4$       B.  $-4 < x < 14$   
C.  $x > -4$  or  $x < 14$       D. None of the above
- \_\_\_\_\_9. 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
- \_\_\_\_\_10. What is the vertical asymptote of  $y = \frac{2x^3 + 5}{x^2 - 4}$ ?
- A.  $x = 2$       B.  $x = 4$       C.  $x = \pm 2$       D. No vertical asymptote