

Functions and Graphs test: This assessment is for those students planning on taking Calculus as their first college math course and who did not score at or above the necessary cut scores on the ACT math subscore or the College Level Math Accuplacer test. The test measures your ability to solve problems that involve the notion and concepts of a function and to solve problems that involve algebraic, exponential, logarithmic, and trigonometric functions and their graphs.

Sample questions:

1. If $f(x) = |1 - x| + |x - 1|$ then $f(3) =$
 a.) 6 b.) 4 c.) 2 d.) 0

2. $\cos 470 =$
 a.) $\cos 70$ b.) $\cos 90$ c.) $\cos 110$ d.) $\cos 170$

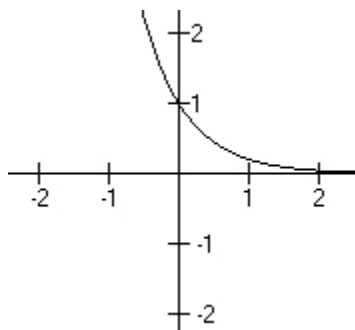
3. For $f(x) = \frac{5}{x}$ and $g(x) = \sqrt{x}$, $f(g(16)) =$
 a.) 20 b.) $\frac{\sqrt{5}}{4}$ c.) $\frac{5}{4}$ d.) $\frac{2}{5}$

4. $\cos^2\theta - 1 =$
 a.) $\cos 2\theta$ b.) $\sin^2\theta$ c.) $-\sin^2\theta$ d.) $\sec^2\theta$

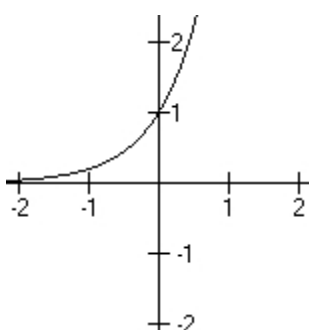
5. For $x > 0$, $\log_6 3 + 2 \log_6 x - \log_6(x - 4) =$
 a.) $\log_6 \frac{6x}{x-4}$ b.) $\log_6 \frac{3x^2}{x-4}$ c.) $\log_6 \frac{2x^3}{x-4}$ d.) $\log_6 3x^2(x - 4)$

6. Which of the following best represents the graph of $f(x) = 5^x$?

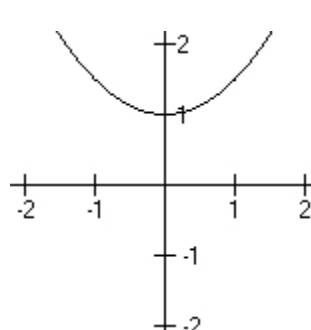
a.



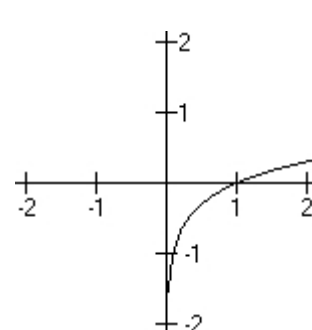
b.



c.



d.



SOLUTIONS:

1. B

2. C

3. C

4. C

5. B

6. B