Name: _____ _____ **/ 25**

Please circle your instructor's name: Kevin Meek James Gossell Margaret Short

There are 6 questions worth 25 points on this quiz. No aids (book, calculator, etc.) are permitted. **Show all work for full credit.** Give **exact** numerical answers such as $\sqrt{7}$ or $\frac{5}{\pi}$.

1. [6 points] State the domain and range of the following functions:

a. $f(x) = \dfrac{3}{x-5}$

domain: _____ range: _____

b. $g(x) = -2\sqrt{x+4} - 3$

domain: _____ range: _____

c. $h(x) = 3^{-x}$

domain: _____ range: _____

2. [5 points] Determine the following for the function $f(x) = x^2 - 3x + 2$. **Simplify** your answers.

a. $f(4)$

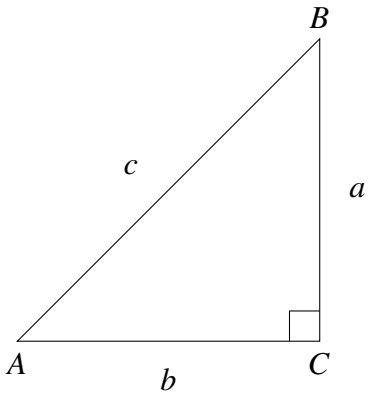
b. $f(2y)$

c. $f(a-2)$

d. Find all values of x such that $f(x) = 12$

3. [3 points] Write the equation of the line that passes through the points $(2,3)$ and $(-4,1)$.

4. [4 points] In the right triangle below, suppose $a = 4$ and $c = 5$.



a. Determine the length of b. Show your work.

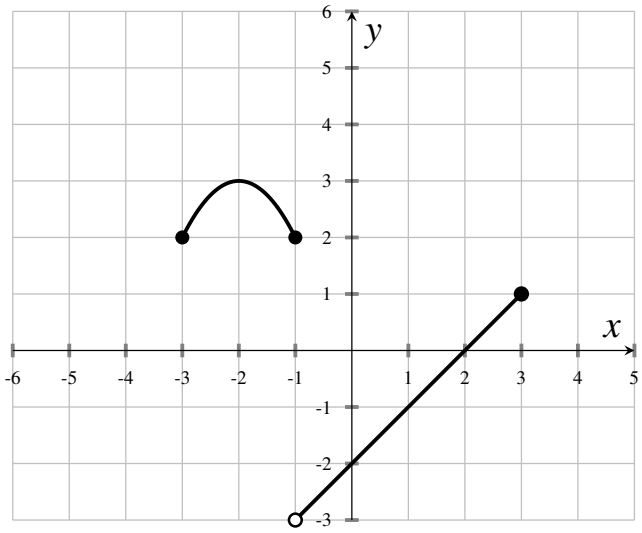
b. Determine the value of $\sin(A)$?

c. Determine the value of $\cos(A)$?

d. Determine the value of $\tan(A)$?

5. [1 point] Evaluate $\cos(2\pi/3)$.

6. [6 points] The complete graph of the function $G(x)$ is given below.



a. State the domain of G. _____

b. State the range of G. _____

c. State the y-intercept of G. _____

d. State the x-intercept(s) of G? _____

e. Graph the transformed function $G(x-2)+3$ on the axes above.