

## Quiz Card #1

1. Solve  $5 - 3|10x + 8| < -1$

2. State the domain of  $f(x) = \sqrt{3x+4}$

3. Solve  $\log_x 27 = \frac{-3}{2}$

4. Solve  $\log_2 (x+3) - \log_2 x = 1$

5. Factor  $8x^3 - 27$ .

## Quiz Card #2

① Solve  $\sqrt{3x+4} + \sqrt{x+2} = 2$

② State the domain:  $f(x) = \frac{3}{\sqrt{2x-1}}$

③ Solve  $\log_4 (x+3) = 2 - \log_4 (x-3)$

④ Solve  $(x+3) \log_a a^x = x$

⑤ Is the function, even, odd or neither?

a)  $f(x) = 2|x| - 5$       b)  $g(x) = \sqrt{3x+9} - 1$

## Quiz Card #3

① State the domain and range of:

a)  $f(x) = 3^{x+5} - 4$

b)  $g(x) = \log(3x-9)+1$

② Solve  $27^{-x} \cdot 81 = 243^{3-3x}$

③ Evaluate  $\log_{\frac{1}{2}} 16$

④ Solve  $-4|1-3x| < -20$

⑤ Solve  $3 + \sqrt{m-6} = \sqrt{m+9}$

## Quiz Card #4

① State the domain of  $f(x) = \frac{5}{x^2+9}$

② Evaluate  $\frac{f(x+h) - f(x)}{h}$  if  $f(x) = 4 - 3x^2$ .

③ Solve  $\log_{\pi} \pi^{2x+3} = 4$

④ Condense to a single logarithm.

$$\frac{1}{2} \log_a x + 3 \log_a y - 2 \log_a x$$

⑤ Solve  $(x+1)^3 - 4(x+1) = 0$

## Quiz Card #5

① Find  $f^{-1}(x)$  if  $f(x) = \sqrt[3]{\frac{1}{4}x + 5}$

② Solve  $\sqrt{y+15} - \sqrt{2y+7} = 1$

③ Solve  $8^{2\log_8 x + \log_8 x} = 27$

④ Condense to a single logarithm.

$$\log_a 2x + 3(\log_a x - \log_a y)$$

⑤ Factor  $x^2y^2 + 9x^2 - 4y^2 - 36$ .

## Quiz Card #6

① Factor  $3x^{3n} + 24y^{bn}$

② Solve  $3x + \sqrt{x} - 4 = 0$

③ Solve  $|\log_5 x| = 2$

④ Solve  $\log_5 \sqrt{x^2+1} = 1$

⑤ Evaluate  $\frac{f(x+h) - f(x)}{h}$  if  $f(x) = -x^2 + 5$

# Quiz Card #7

① State the domain and range of:

a)  $y = 2\left(\frac{1}{2}\right)^{-x+2} + 1$

b)  $y = \log_3\left(\frac{1}{2}x + 2\right) - 1$

② Solve  $\ln 2x = 2 - \ln 3$

③ Solve  $e \cdot e^{x+1} = 2$

④ Solve  $16^x \cdot 8^{x+5} = 3$

⑤ Factor  $2xy - x^2y - 6 + 3x$