

MARKS

NAME:

CLASS:

FUNCTION & GRAPHS: EXPONENTIAL AND LOG

1 Find the range of $e^{2-x} + 3$.

- A $(3, \infty)$ B $(2, \infty)$ C $[3, \infty)$ D $(-\infty, 3)$

2 Find the range $f(x) = -3^{x-5}$.

- A $(5, \infty)$ B $(-\infty, 0]$ C $[5, \infty)$ D $(-\infty, 0)$

3 Find the domain $f(x) = \log(7-2x)$.

- A $\left(-\infty, \frac{7}{2}\right]$ B $\left(\frac{7}{2}, \infty\right)$ C $\left(-\infty, \frac{7}{2}\right)$ D $\left[\frac{7}{2}, \infty\right)$

4 Find the inverse and domain of the inverse of the function $f(x) = e^{2x} + 1$.

A $f^{-1}(x) = \frac{1}{2} \ln(x+1), Df^{-1} = (1, \infty)$ B $f^{-1}(x) = \frac{1}{2} \ln(x-1), Df^{-1} = (1, \infty)$

C $f^{-1}(x) = \frac{1}{2} \ln(2x-1), Df^{-1} = \left(\frac{1}{2}, \infty\right)$ D $f^{-1}(x) = \ln(2x-1), Df^{-1} = \left(\frac{1}{2}, \infty\right)$

5 Find the domain and range of $f(x) = 3 \ln\left(\frac{x}{2}\right)$.

A $D_f = (0, \infty), R_f = \mathbb{R}$ B $D_f = (2, \infty), R_f = \mathbb{R}$

C $D_f = \left(\frac{1}{2}, \infty\right), R_f = \mathbb{R}$ D $D_f = \left(-\infty, \frac{1}{2}\right), R_f = \mathbb{R}$

6 Find the inverse and domain inverse of $f(x) = \ln(3x+4)$

A $f^{-1}(x) = \frac{e^x - 4}{3}, Df^{-1} = (-\infty, \infty)$ B $f^{-1}(x) = \frac{e^x + 4}{3}, Df^{-1} = (3, \infty)$

C $f^{-1}(x) = \frac{e^x - 1}{3}, Df^{-1} = \left(-\frac{1}{3}, \infty\right)$ D $f^{-1}(x) = \frac{e^x - 3}{4}, Df^{-1} = (-\infty, \infty)$

7 Given that $f(x) = 3 + 2^x$. Find f^{-1} .

A $f^{-1}(x) = \ln(x+3)$ B $f^{-1}(x) = \log_2(x-3)$ C $f^{-1}(x) = \log_2(x+3)$ D $f^{-1}(x) = \ln(x) - 3$

By Madam Ain KMPH