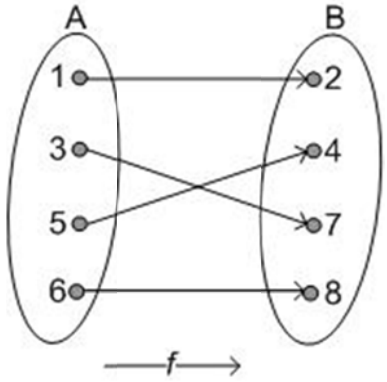
Q**1**: From the following graph, $f^{-1}(2) =$



A) 1	B) 3	C) 5	D) 6

Q**2**: If the function $f = \{(-1,-2),(0,2),(3,7),(6,10)\}$, then f^{-1} is given by

A) $\{(-1,-2),(2,0),(7,3),(10,6)\}$
B) $\{(-1,-2),(2,0),(7,3),(6,10)\}$
C) $\{(-2,-1),(2,0),(7,3),(10,6)\}$
D) $\{(-2,-1),(2,0),(3,7),(10,6)\}$

Q**3**: The graph of $f^{-1}(x)$ is obtained by reflecting the graph of $f(x)$ about

A) y-axis.	B) x-axis.	C) the line $y = x$.	D) the origin.

Q**4**: If the range of a function is $(-2,\infty)$, then the domain of its inverse function is

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

Q**5**: If $f(x) = x - 1$, then $f^{-1}(x) =$

A) $\dfrac{1}{x-1}$	B) $-(x+1)$	C) $1-x$	D) $x+1$

Q**6**: If $f(x) = \sqrt{x-1}$, then $f^{-1}(x) =$

A) x^2+1	B) x^2-1	C) $1-x^2$	D) $1/\sqrt{x-1}$

Q**7**: If $f(x) = x^3$, then $f^{-1}(x) =$

A) $\sqrt[3]{x}+1$	B) $1/x^3$	C) $\sqrt[3]{x}$	D) $\sqrt{x}$

Q**8**: If $f(x)=1+\sqrt[3]{x}$, then $f^{-1}(x)=$			
A) $(1-x)^3$	B) $(x-1)^3$	C) $(x+1)^3$	D) x^3-1

Q**9**: If $2^{x-2}=8$, then $x=$			
A) 1	B) -1	C) 5	D) -5

Q**10**: If $3^{2x-4}=9$, then $x=$			
A) 3	B) -3	C) 2	D) -2

Q**11**: If $4^{x-1}=8$, then $x=$			
A) 1	B) -1	C) $\frac{1}{2}$	D) $\frac{5}{2}$

Q**12**: If $4^{x+1}=8$, then $x=$			
A) 1	B) -1	C) $\frac{1}{2}$	D) $\frac{5}{2}$

Q**13**: If $9^{x+1}=27$, then $x=$			
A) $\frac{1}{2}$	B) $\frac{5}{2}$	C) 1	D) -1

Q**14**: $\log_5 125=$			
A) 10	B) 2	C) 1	D) 3

Q**15**: $\log_{1/3} 3^{2x}=$			
A) x	B) $2x$	C) $-2x$	D) $-x$

Q**16**: $\log 25+\log 4=$			
A) 2	B) 1	C) 3	D) 5

Q**17**: $\log_2 24-\log_2 3+\log_7 1=$			
A) 1	B) 3	C) 2	D) 4

Q**18**: $\log_2 64-\log_2 32+\log_2 2=$			
A) 1	B) 2	C) 3	D) 0

Q**19**: $\log_3 27-\log_3 81+5\log_6 6=$			
A) 4	B) 1	C) 3	D) 0

Q**20**: $\log_3 \frac{1}{27}=$			
A) 3	B) 1	C) -1	D) -3

Q**21**: $5^{2\log_5 2}=$			
A) 2	B) 4	C) 1	D) 5

Q**22**: $e^{2\ln 5} =$			
A) 10	B) 5	C) 25	D) 1

Q**23**: $e^{3\ln x} =$			
A) x	B) x^3	C) 3	D) $3x$

Q**24**: $(\log_4 16)(\log_4 2) =$			
A) 1	B) 0	C) 4	D) 2

Q**25**: $\log_6 9 + \log_6 4 =$			
A) 3	B) 0	C) 1	D) 2

Q**26**: $\left(x^{-3}\right)^{-2} =$			
A) x^6	B) x^{-5}	C) x^{-6}	D) x^5

Q**27**: If $\log_5 x = 1$, then $x =$			
A) 1	B) 5	C) 0	D) 2

Q**28**: If $\log_2(x+1) = 2$, then $x =$			
A) 3	B) 1	C) 0	D) 4

Q**29**: If $\log_3(x-2) = 1$, then $x =$			
A) 1	B) 5	C) 0	D) 2

Q**30**: If $e^{x-2} = 1$, then $x =$			
A) 0	B) 1	C) 2	D) -2

Q**31**: $(3x^3y^4)^3 =$			
A) $9x^9y^{12}$	B) $27x^9y^{12}$	C) $27x^6y^7$	D) $9x^6y^7$

Q**32**: If $y = \sin^3(4x)$, then $y' =$			
A) $3\sin^2 4x \cos 4x$	B) $4\cos^3 4x$	C) $12\sin^2 4x \cos 4x$	D) $\cos^3 4x$

Q**33**: If $y = e^{x^2-2x}$, then $y' =$			
A) $(2x-2)e^{x^2-2x}$	B) $(2x+2)e^{x^2-2x}$	C) e^{x^2-2x}	D) $2x\,e^{x^2-2x}$

Q**34**: If $y = x\,e^{x}$, then $\dfrac{dy}{dx} =$			
A) $(x+1)e^{x}$	B) $x + e^{x}$	C) $1 + e^{x}$	D) $x\,e^{x} + 1$

Q**35**: If $y = x^{2} - e^{3x}$, then $y'' =$			
A) $2x - e^{3x}$	B) $2 - 9e^{3x}$	C) $-9e^{3x}$	D) e^{3x}

Q**36**: If $y = 3^{\cot x}$, then $y' =$			
A) $-3^{\cot x}\csc^{2} x$	B) $-3^{\cot x}\ln 3\csc^{2} x$	C) $3^{\cot x}\ln 3\csc^{2} x$	D) $3^{\cot x}\csc^{2} x$

Q**37**: If $y = \ln\left(x^{2}\right)$, then $y' =$			
A) $\dfrac{2}{x}$	B) $\dfrac{3}{x}$	C) $\dfrac{4}{x}$	D) $\dfrac{5}{x}$

Q**38**: If $y = \ln(x + \sin x)$, then $\dfrac{dy}{dx} =$			
A) $\dfrac{1+\cos x}{x+\sin x}$	B) $\dfrac{1}{x+\sin x}$	C) $\dfrac{1+\sin x}{x+\sin x}$	D) $\dfrac{x+\cos x}{x+\sin x}$

Q**39**: If $y = \log_{2}(x + e^{x})$, then $y' =$			
A) $\dfrac{1+e^{x}}{x+e^{x}}$	B) $\dfrac{1+e^{x}}{(x+e^{x})\ln 2}$	C) $\dfrac{e^{x}}{(x+e^{x})\ln 2}$	D) $\dfrac{e^{x}}{x+e^{x}}$

Q**40**: If $y = \ln(\sin x) + \sin(\ln x)$, then $y' =$			
A) $\tan x + \dfrac{\cos(\ln x)}{x}$	B) $\cot x + \dfrac{\sin(\ln x)}{x}$	C) $\cot x + \dfrac{\cos(\ln x)}{x}$	D) $\dfrac{1}{\sin x} + \dfrac{\cos(\ln x)}{x}$

Q**41**: If $y = e^{2x}$, then $y^{(5)} =$			
A) $24e^{2x}$	B) $8e^{2x}$	C) $16e^{2x}$	D) $32e^{2x}$

Q**42**: If $y = e^{x}\tan x$, then $y' =$			
A) $e^{x}(\tan x - \sec^{2} x)$	B) $e^{x}(\tan x + \sec^{2} x)$	C) $e^{x}(\sec^{2} x - \tan x)$	D) $-e^{x}(\sec^{2} x + \tan x)$

Q**43**: If $y = 5^{x}\sin x$, then $y' =$			
A) $5^{x}(\cos x + \sin x)$	B) $5^{x}(\cos x - \sin x \ln 5)$	C) $5^{x}(\cos x - \sin x)$	D) $5^{x}(\cos x + \sin x \ln 5)$

Q**44**: If $y = \ln(\sin x)$, then $y' =$			
A) $-\tan x$	B) $\cot x$	C) $-\cot x$	D) $\tan x$

Q**45**: If $y = \ln(\cos x)$, then $\frac{dy}{dx} =$			
A) $-\tan x$	B) $\cot x$	C) $-\cot x$	D) $\tan x$

Q**46**: If $y = \ln\sqrt{x^2+1}$, then $\frac{dy}{dx} =$			
A) $\frac{2x}{x^2+1}$	B) $\frac{x}{\sqrt{x^2+1}}$	C) $\frac{x}{x^2+1}$	D) $\frac{2x}{\sqrt{x^2+1}}$

Q**47**: If $y = \log_5(x+e^{2x})$, then $\frac{dy}{dx} =$			
A) $\frac{1+e^{2x}}{(x+e^{2x})\ln 5}$	B) $\frac{1+2e^{2x}}{(x+e^{2x})\ln 5}$	C) $\frac{1+e^{2x}}{(x+e^{2x})}$	D) $\frac{1+2e^{2x}}{(x+e^{2x})}$

Q**48**: If $y = x^8 + 8^x$, then $\frac{dy}{dx} =$			
A) $x^7 + 8^x \ln 8$	B) $8x^7 + 8^x$	C) $8x^7 - 8^x \ln 8$	D) $8x^7 + 8^x \ln 8$

Q**49**: If $y = \frac{1}{1+7^x}$, then $y' =$			
A) $\frac{7^x \ln 7}{(1+7^x)^2}$	B) $-\frac{7^x \ln 7}{(1+7^x)^2}$	C) $-\frac{7^x}{(1+7^x)^2}$	D) $\frac{7^x}{(1+7^x)^2}$

Q**50**: If $y = 4^{x\sin x}$, then $y' =$	
A) $4^{x\sin x}(x\cos x + \sin x)\ln 4$	C) $4^{x\sin x}(x\sin x + \cos x)\ln 4$
B) $4^{x\sin x}(x\cos x + \sin x)$	D) $4^{x\sin x}(x\sin x + \cos x)$

Q**51**: If $y = e^{x\cos x}$, then $y' =$			
A) $e^{x\cos x}(x + \cos x)$	B) $e^{x\cos x}(x - \sin x)$	C) $e^{x\cos x}(\cos x + x\sin x)$	D) $e^{x\cos x}(\cos x - x\sin x)$

Q**52**: If $y = e^{x^2+\sin(5x)}$, then $y' =$			
A) $e^{x^2+\sin(5x)}\left[x^2 + \sin(5x)\right]$	B) $e^{x^2+\sin(5x)}\left[2x + \cos(5x)\right]$	C) $e^{x^2+\sin(5x)}\left[2x + 5\cos(5x)\right]$	D) $e^{x^2+\sin(5x)}$

Q**53**: If $y = \frac{\ln x}{x}$, then $y' =$			
A) $\frac{1-\ln x}{x}$	B) $\frac{1-\ln x}{x^2}$	C) $\frac{1+\ln x}{x^2}$	D) $\frac{1+\ln x}{x}$

Q**54**: The critical numbers of the function $f(x)=x^3+3x^2-9x+2$ are			
A) $-1,1$	B) $-3,3$	C) $-3,1$	D) $-1,3$

Q**55**: The function $f(x)=x^3+3x^2-9x+2$ is increasing on			
A) $(-3,1)$	B) $(-1,3)$	C) $(-\infty,-1)\cup(3,\infty)$	D) $(-\infty,-3)\cup(1,\infty)$

Q56: The function $f(x)=x^3+3x^2-9x+2$ is decreasing on			
A) $(-3,1)$	B) $(-1,3)$	C) $(-\infty,-1)\cup(3,\infty)$	D) $(-\infty,-3)\cup(1,\infty)$

Q**57**: The function $f(x)=x^3+3x^2-9x+2$ has a local maximum at the point			
A) $(-1,13)$	B) $(1,-3)$	C) $(3,29)$	D) $(-3,29)$

Q**58**: The function $f(x)=x^3+3x^2-9x+2$ has a local minimum at the point			
A) $(-1,13)$	B) $(1,-3)$	C) $(3,29)$	D) $(-3,29)$

Q**59**: The function $f(x)=x^3+3x^2-9x+2$ has an inflection point at			
A) $(-1,13)$	B) $(1,-3)$	C) $(3,29)$	D) $(-3,29)$

Q**60**: The graph of the function $f(x)=x^3+3x^2-9x+2$ concave upward on			
A) $(-\infty,1)$	B) $(-\infty,-1)$	C) $(1,\infty)$	D) $(-1,\infty)$

Q**61**: The graph of the function $f(x)=x^3+3x^2-9x+2$ concave downward on			
A) $(-\infty,1)$	B) $(-\infty,-1)$	C) $(1,\infty)$	D) $(-1,\infty)$

Q**62**: The absolute maximum point of the function $f(x)=x^2-2x+1$ in $[0,3]$ is			
A) $(0,1)$	B) $(0,2)$	C) $(3,4)$	D) $(1,0)$

Q**63**: The absolute minimum point of the function $f(x)=x^2-2x+1$ in $[0,3]$ is			
A) $(0,1)$	B) $(0,2)$	C) $(3,4)$	D) $(1,0)$

Best Wishes