Q**1**: The solution set of the inequality $3x + 5 \le 8$ is			
A) $(-\infty, 1)$	B) $(-\infty, 1]$	C) $[1, \infty)$	D) $(1, \infty)$

Q**2**: The solution set of the inequality $5x - 3 > 7 - 3x$ is			
A) $\left(-\infty, \frac{5}{4}\right)$	B) $\left[\frac{5}{4}, \infty\right)$	C) $\left(\frac{5}{4}, \infty\right)$	D) $\left(-\infty, \frac{5}{4}\right]$

Q**3**: The solution set of the inequality $2 < 3x - 4 \le 5$ is			
A) $(2, 3]$	B) $[2, 3)$	C) $(2, 3)$	D) $[2, 3]$

Q**4**: The solution set of the inequality $x^2 < 9$ is			
A) $(-\infty, -3) \cup (3, \infty)$	B) $[-3, 3]$	C) $(-\infty, -3] \cup [3, \infty)$	D) $(-3, 3)$

Q**5**: The solution set of the inequality $x^2 \ge 9$ is			
A) $(-\infty, -3) \cup (3, \infty)$	B) $[-3, 3]$	C) $(-\infty, -3] \cup [3, \infty)$	D) $(-3, 3)$

Q**6**: The solution set of the inequality $x^2 - 2x \le 0$ is			
A) $(-\infty, 0) \cup (2, \infty)$	B) $(0, 2)$	C) $(-\infty, 0] \cup [2, \infty)$	D) $[0, 2]$

Q**7**: The solution set of the inequality $x^2 - 8x + 12 > 0$ is			
A) $(-\infty, 2) \cup (6, \infty)$	B) $(2, 6)$	C) $(-\infty, 3] \cup [4, \infty)$	D) $[3, 4]$

Q**8**: The solution set of the equality $\lvert x - 3 \rvert = 7$ is			
A) $\{4, 10\}$	B) $\{-4, 10\}$	C) $\{-10, -4\}$	D) $\{-10, 4\}$

Q**9**: The solution set of the inequality $\lvert 2x + 5 \rvert \ge 7$ is			
A) $(-6, 1)$	B) $(-\infty, -6) \cup (1, \infty)$	C) $(-\infty, -6] \cup [1, \infty)$	D) $[-6, 1]$

Q**10**: The solution set of the inequality $\lvert 3x - 7 \rvert < 2$ is			
A) $\left(\frac{5}{3}, 3\right)$	B) $\left(-\infty, \frac{5}{3}\right) \cup (3, \infty)$	C) $\left(-\infty, \frac{5}{3}\right] \cup [3, \infty)$	D) $\left[\frac{5}{3}, 3\right]$

Q**11**: The distance between the two points $(0, 3)$ and $(4, 0)$ is			
A) $\sqrt{50}$	B) $\sqrt{10}$	C) 25	D) 5

Q**12**: The distance between the two points $(3,2)$ and $(-1,-2)$ is			
A) $\sqrt{32}$	B) $\sqrt{8}$	C) 4	D) $\sqrt{18}$

Q**13**: Equation of the vertical line passing through the point $(-2,5)$ is			
A) $x=5$	B) $y=-2$	C) $y=5$	D) $x=-2$

Q**14**: Equation of the horizontal line passing through the point $(-2,5)$ is			
A) $x=5$	B) $y=-2$	C) $y=5$	D) $x=-2$

Q**15**: Slope of the following line $2y-5x+7=0$ is			
A) $\frac{5}{2}$	B) $-\frac{5}{2}$	C) $\frac{2}{5}$	D) $-\frac{2}{5}$

Q**16**: Equation of the line with slope -6 and y-intercept 5 is			
A) $y=-6x+5$	B) $y=6x+5$	C) $y=-6x-5$	D) $y=6x-5$

Q17: The y-intercept of the line $x+2y=-4$ is			
A) 2	B) -2	C) 4	D) -4

Q**18**: The x-intercept of the line $x+2y=-4$ is			
A) 2	B) -2	C) 4	D) -4

Q**19**: Slope of the line that passes through the points $(4,1)$ and $(-2,3)$ is			
A) -3	B) $1/3$	C) $-1/3$	D) 3

Q**20**: Equation of the line that passes through the point $(-1,1)$ with slope 1 is			
A) $y=-x+2$	B) $y=x-2$	C) $y=x+2$	D) $y=-x-2$

Q**21**: Equation of the line passing through the point $(1,2)$ with slope 5 is			
A) $y=-5x+3$	B) $y=5x+3$	C) $y=-5x-3$	D) $y=5x-3$

Q**22**: Equation of the line passing through the points $(4,1)$ and $(-2,3)$ is			
A) $x+3y+7=0$	B) $x+3y-7=0$	C) $x-3y-7=0$	D) $x-3y+7=0$

Q**23**: Equation of the line that passes through the point $(2,1)$ and parallel to the line $y=x+2$ is			
A) $y=x+1$	B) $y=x-1$	C) $y=-x+3$	D) $y=x-3$

Q**24**: Equation of the line that passes through the point $(2,1)$ and perpendicular to the line $y=x+2$ is			
A) $y=x+1$	B) $y=x-1$	C) $y=-x+3$	D) $y=x-3$

Q**25**: Equation of the line that passes through the point $(-2,2)$ and parallel to the line $2x+y=4$ is			
A) $2x+y=-2$	B) $2x+y=2$	C) $x-2y=6$	D) $x-2y=-6$

Q**26**: The equation of the line passes through the point $(-2,2)$ and perpendicular to the line $2x+y=4$ is			
A) $2x+y=-2$	B) $2x+y=2$	C) $x-2y=6$	D) $x-2y=-6$

Q**27**: If the graph of $y=1-x^2$ is shifting to the left 1 unit and then it is shifting downward 1 unit, thus the new graph can be represented by			
A) $y=(x+1)^2$	B) $y=-(x+1)^2$	C) $y=-(x-1)^2$	D) $y=(x-1)^2$

Q**28**: If the graph of $y=\sqrt{x}$ is shifting to the right 4 units and then it is shifting downward 2 units, thus the new graph can be represented by			
A) $y=\sqrt{x+4}-2$	B) $y=\sqrt{x-4}+2$	C) $y=\sqrt{x+4}+2$	D) $y=\sqrt{x-4}-2$

Q**29**: If the graph of $y=\sqrt{x}$ is shifting to the left 4 units and then it is shifting upward 2 units, thus the new graph can be represented by			
A) $y=\sqrt{x+4}-2$	B) $y=\sqrt{x-4}+2$	C) $y=\sqrt{x+4}+2$	D) $y=\sqrt{x-4}-2$

Q**30**: Domain of the function $f(x)=\sqrt{8-2x}$ is			
A) $(-\infty,4)$	B) $(-\infty,4]$	C) $(4,\infty)$	D) $[4,\infty)$

Q**31**: Domain of the function $f(x)=\dfrac{1}{x-1}$ is			
A) $\mathbb{R}$	B) $\mathbb{R}-\{0\}$	C) $\mathbb{R}-\{-1\}$	D) $\mathbb{R}-\{1\}$

Q**32**: Domain of the function $g(t)=\dfrac{t}{\sqrt{2-t}}$ is			
A) $(2,\infty)$	B) $(-\infty,2]$	C) $(-\infty,2)$	D) $[2,\infty)$

Q**33**: Domain of the function $f(x)=\dfrac{3x+5}{x^2-x-12}$ is			
A) $\mathbb{R}-\{3,4\}$	B) $\mathbb{R}-\{-4,3\}$	C) $\mathbb{R}-\{-3,4\}$	D) $\mathbb{R}-\{-4,-3\}$

Q**34**: Domain of the function $f(x)=\sqrt{x^2-4}$ is			
A) $(-\infty,-2)\cup(2,\infty)$	B) $[-2,2]$	C) $(-2,2)$	D) $(-\infty,-2]\cup[2,\infty)$

Q**35**: The function $f(x)=x^2+1$ is			
A) an even function.	B) an odd function.	C) an even and odd function.	D) neither even nor odd function

Q**36**: The function $f(x)=x^3+x$ is			
A) an even function.	B) an odd function.	C) an even and odd function.	D) neither even nor odd function.

Q**37**: The function $f(x)=\frac{1}{x^2-1}$ is			
A) an even function.	B) an odd function.	C) an even and odd function.	D) neither even nor odd function.

Q**38**: The function $f(x)=x^3-2$ is			
A) an even function.	B) an odd function.	C) an even and odd function.	D) neither even nor odd function.

Q**39**: The function $f(x)=\frac{x}{x^2-1}$ is			
A) an even function.	B) an odd function.	C) an even and odd function.	D) neither even nor odd function.

Q**40**: The function $f(x)=x^2-6x$ is			
A) an even function.	B) an odd function.	C) an even and odd function.	D) neither even nor odd function.

Q**41**: If $f(x)=x$ and $g(x)=\sqrt{x-1}$, then domain of the function $(f+g)(x)$ is			
A) $[1,\infty)$	B) $(-\infty,1]$	C) $\mathbb{R}$	D) $(1,\infty)$

Q**42**: If $f(x)=x$ and $g(x)=\sqrt{x-1}$, then domain of the function $(f-g)(x)$ is			
A) $(-\infty,1]$	B) $\mathbb{R}$	C) $(1,\infty)$	D) $[1,\infty)$

Q**43**: If $f(x)=x$ and $g(x)=\sqrt{x-1}$, then domain of the function $(f\times g)(x)$ is			
A) $\mathbb{R}$	B) $(-\infty,1]$	C) $[1,\infty)$	D) $(1,\infty)$

Q**44**: If $f(x)=x$ and $g(x)=\sqrt{x-1}$, then domain of the function $(f/g)(x)$ is			
A) $[1,\infty)$	B) $(-\infty,1]$	C) $\mathbb{R}$	D) $(1,\infty)$

Q**45**: If $f(x)=x+5$ and $g(x)=x^2-3$, then $(f\circ g)(x)=$			
A) x^2+2	B) x^2-2	C) $-x^2+2$	D) $-x^2-2$

Q**46**: If $f(x)=x+5$ and $g(x)=x^2-3$, then $(g\circ f)(x)=$			
A) $x^2+10x-22$	B) $x^2+10x+22$	C) $x^2-10x+22$	D) $x^2-10x-22$

Q**47**: If $f(x)=x+5$, then $(f\circ f)(x)=$			
A) x^2+5	B) $x+25$	C) $x+10$	D) x^2+10

Q**48**: If $f(x)=x+5$ and $g(x)=x^2-3$, then $(f\circ g)(0)=$			
A) 4	B) -2	C) 3	D) 2

Q**49**: If $f(x)=x+5$ and $g(x)=x^2-3$, then $(g\circ f)(0)=$			
A) 20	B) –22	C) 22	D) 21

Q**50**: If $f(x)=\frac{1}{1-x}$ and $g(x)=\sqrt{x-1}$, then $(f\circ g)(x)=$			
A) $\frac{-1}{1-\sqrt{x-1}}$	B) $\frac{1}{\sqrt{x-1}}$	C) $\frac{1}{1+\sqrt{x-1}}$	D) $\frac{1}{1-\sqrt{x-1}}$

Q**51**: If $f(x)=\frac{1}{1-x}$ and $g(x)=\sqrt{x-1}$, then the domain of $(f\circ g)(x)$ is			
A) $(1,\infty)$	B) $[1,2)\cup(2,\infty)$	C) $[1,\infty)$	D) $\mathbb{R}$

Q**52**: If $f(x)=\frac{1}{1-x}$ and $g(x)=\sqrt{x-1}$, then $(g\circ f)(x)=$			
A) $\sqrt{\frac{x}{x-1}}$	B) $\frac{x}{\sqrt{x-1}}$	C) $\sqrt{\frac{x}{1-x}}$	D) $\frac{x}{\sqrt{1-x}}$

Q**53**: If $f(x)=\frac{1}{1-x}$ and $g(x)=\sqrt{x-1}$, then the domain of $(g\circ f)(x)$ is			
A) $[0,1]$	B) $[0,1)$	C) $(0,1)$	D) $\mathbb{R}$

Q**54**: $\lfloor -3.2 \rfloor =$			
A) 3.2	B) –3.2	C) –3	D) –4

Q**55**: If a circle has radius 3 cm, what is the length of an arc subtended by a central angle of $\frac{2\pi}{3}$ rad ?			
A) $\frac{2\pi}{9}$ cm	B) $\frac{9}{2\pi}$ cm	C) 2π cm	D) $\frac{1}{2\pi}$ cm

Q**56**: $\frac{5\pi}{3}=$			
A) 120°	B) 270°	C) 300°	D) 150°

Q**57**: $150^\circ =$			
A) $\frac{7\pi}{6}$	B) $\frac{5\pi}{6}$	C) $\frac{6\pi}{5}$	D) $\frac{7\pi}{5}$

Q**58**: $\cos\left(\frac{3\pi}{4}\right)=$			
A) $-\sqrt{2}$	B) $\sqrt{2}$	C) $\frac{1}{\sqrt{2}}$	D) $-\frac{1}{\sqrt{2}}$

Q**59**: $\sin\left(\frac{2\pi}{3}\right)=$			
A) $\frac{1}{2}$	B) $-\frac{\sqrt{3}}{2}$	C) $\frac{\sqrt{3}}{2}$	D) $-\frac{1}{2}$

Q**60**: $\cos(\pi+x)=$			
A) $-\cos x$	B) $-\sin x$	C) $\cos x$	D) $\sin x$

Q**61**: $\sin\left(\frac{3\pi}{2}-x\right)=$			
A) $\cos x$	B) $-\sin x$	C) $-\cos x$	D) $\sin x$

Q**62**: The function $f(x)=\frac{\sin x}{x}$ is			
A) an even function.	B) an odd function.	C) an even and odd function.	D) neither even nor odd function.

Q**63**: $\cos^4 x-\sin^4 x=$			
A) $\cos^2 x$	B) 1	C) $\sin(2x)$	D) $\cos(2x)$

Q**64**: If $\sin\theta=\frac{3}{5}$, where $\frac{\pi}{2}<\theta<\pi$, then $\tan\theta=$			
A) $-\frac{4}{3}$	B) $\frac{3}{4}$	C) $-\frac{3}{4}$	D) $\frac{4}{3}$

Q**65**: If $\sin\theta=-\frac{1}{2}$, where $\pi<\theta<\frac{3\pi}{2}$, then $\cos\theta=$			
A) $-\frac{\sqrt{3}}{2}$	B) $\frac{\sqrt{3}}{2}$	C) $-\frac{2}{\sqrt{3}}$	D) $\frac{2}{\sqrt{3}}$

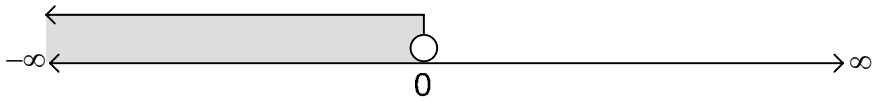
Q**66**: If $\tan\theta=-\frac{4}{3}$, where $\frac{\pi}{2}<\theta<\pi$, then $\csc\theta=$			
A) $-\frac{5}{4}$	B) $-\frac{5}{3}$	C) $\frac{5}{4}$	D) $\frac{5}{3}$

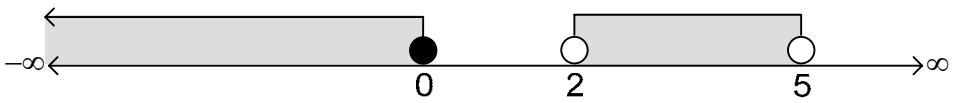
Q**67**: If $\sec\theta=\frac{\sqrt{5}}{2}$, where $\frac{3\pi}{2}<\theta<2\pi$, then $\tan\theta=$			
A) $-\frac{1}{2}$	B) -2	C) $\frac{1}{2}$	D) 2

Q**68**: $\sec\left(\frac{4\pi}{3}\right)=$			
A) $\frac{2}{\sqrt{3}}$	B) 2	C) -2	D) $-\frac{2}{\sqrt{3}}$

Q**69**: If $\sin\theta > 0$ and $\cos\theta < 0$, then the angle θ lies in the			
A) first quadrant.	B) second quadrant.	C) third quadrant.	D) fourth quadrant.

Q**70**: $2\sin\left(\frac{\pi}{8}\right)\cos\left(\frac{\pi}{8}\right) =$			
A) $\frac{1}{\sqrt{2}}$	B) $\frac{\sqrt{3}}{2}$	C) $\frac{1}{2}$	D) $-\frac{1}{\sqrt{2}}$

Q**71**: Choose the interval that describes the shaded region 			
A) $(-\infty, 0)$	B) $(-\infty, 0]$	C) $(0, \infty)$	D) $[0, \infty)$

Q**72**: Choose the intervals that describe the shaded regions 			
A) $(-\infty, 0) \cup [2, 5]$	B) $(-\infty, 0] \cup (2, 5)$	C) $(-\infty, 0) \cup [2, 5)$	D) $(-\infty, 0] \cup (2, 5]$

Q**73**: $\left\lvert\cos\left(150^{\circ}\right)\right\rvert =$			
A) $\sqrt{3}$	B) $\frac{1}{\sqrt{3}}$	C) $\frac{2}{\sqrt{3}}$	D) $\frac{\sqrt{3}}{2}$

Q**74**: $\sin\left(30^{\circ}\right) \times \tan\left(45^{\circ}\right) =$			
A) $\frac{1}{2}$	B) $\frac{1}{\sqrt{2}}$	C) $\frac{1}{\sqrt{3}}$	D) $\frac{\sqrt{3}}{2}$

Q**75**: $2 \times \sin\left(40^{\circ}\right) \times \cos\left(40^{\circ}\right) =$			
A) $\sin\left(40^{\circ}\right)$	B) $\cos\left(40^{\circ}\right)$	C) $\sin\left(80^{\circ}\right)$	D) $\cos\left(80^{\circ}\right)$

Q**76**: $\frac{\sin^2\left(25^{\circ}\right) + \cos^2\left(25^{\circ}\right)}{\csc\left(70^{\circ}\right)} =$			
A) $\sin\left(70^{\circ}\right)$	B) $\cos\left(70^{\circ}\right)$	C) $\csc\left(70^{\circ}\right)$	D) $\sec\left(70^{\circ}\right)$

Q**77**: If $f(x) = \frac{x-1}{x^3 + x^2 - 6x}$, then the domain of $f(x)$ is given by			
A) $\mathbb{R} \setminus \{-3, -2, 0\}$	B) $\mathbb{R} \setminus \{-3, 0, 2\}$	C) $\mathbb{R} \setminus \{-2, 0, 3\}$	D) $\mathbb{R} \setminus \{0, 2, 3\}$

Q**78**: Domain of the following function $f(x)=\frac{\sqrt[4]{x}}{x^2-9}$ is			
A) $(-\infty,0]\setminus\{-3\}$	B) $[0,\infty)\setminus\{3\}$	C) $\mathbb{R}\setminus\{-3,0,3\}$	D) $\mathbb{R}\setminus\{-3,3\}$

Q**79**: Domain of the following function $f(x)=\sqrt[3]{x^2-16}$ is			
A) $(-\infty,-4]\cup[4,\infty)$	B) $\mathbb{R}\setminus\{-4,4\}$	C) $\mathbb{R}\setminus\{16\}$	D) $\mathbb{R}$

Q**80**: Equation of the line that passes through the point $(4,-1)$ and has no slope is			
A) $x=4$	B) $x=-1$	C) $y=4$	D) $y=-1$

Q**81**: Equation of the line that passes through the point $(4,-1)$ with slope zero is			
A) $x=4$	B) $x=-1$	C) $y=4$	D) $y=-1$

Best Wishes