FBQ1: Given that $f(x)=2x+1$, then $f(3)$ is _____
Answer: *7*

FBQ2: _____ is the value of f(-5) in the function $f(x)=x^{2}+2x-3$.
Answer: *12*

FBQ3: The value of $\frac{f(a+h)-f(a)}{h}$ in the function $f(x)=x^{2}-2x+7$ is _____
Answer: *2a+h-2*

FBQ4: Let f(z-1) = z2- 2z +13, then f(-1) is _____
Answer: *13*

FBQ5: Let h(x) = x2+ x, then h(x+1) – h(x) is _____
Answer: *2x+1*

FBQ6: Let f(t-1) = t2+ 2t, then f(2) is _____
Answer: *15*

FBQ7: is called the _____ of A
Answer: *range*

FBQ8: _____ of H
Answer: *domain*

FBQ9: is _____
Answer: *½*

FBQ10: The rate at which is changing with respect to x when x = 1 is _____
Answer: *½*

FBQ11: The position at time t of an object moving along a line is given by s(t) = t3 -6t2 + 9t + 5. The acceleration of the object at t = 1 is _____
Answer: *-6*

FBQ12: The slope of the secant line through the point (1, f(1)) and (4, f(4)) on the graph of y=f(x) is _____
Answer: *15*

FBQ13: Suppose is _____
Answer: *-7*

FBQ14: An object moves along the y-axis (marked in metres) so that its position at the time (in seconds) is $f(x)=x^{3}-6x^{2}+9x$. The velocity at $x=2$ is _____ m/s
Answer: *-3*

FBQ15: A function f(x) is called an even function if _____
Answer: *f(-x)=f(x)*

FBQ16: The evaluation of is _____
Answer: *4*

FBQ17: The evaluation of   is _____
Answer: *4/3*

FBQ18: F The value of x at the maximum point of the curve is _____
Answer: *-1*

FBQ19: _____
Answer: *-7*

FBQ20: Suppose the total cost in Naira of manufacturing q units of a certain commodity is given by the function C(q) = q3 - 30q2 + 500q + 200. The cost of manufacturing 5 units of the commodity is _____
Answer: *N2,075*

FBQ21: The position at time t of an object moving along a line is given by s(t) = t3 - t2 + 9t + 5. The acceleration of the object at t = 4 is _____
Answer: *22*

FBQ22: The position at time t of an object moving along a line is given by s(t) =2 t3 - t2 + 3t -15. The velocity of the object at t =2 is _____
Answer: *23*

FBQ23: Differentiate P(x) = (x – 1)(3x – 2) with respect to x.
Answer: *6x-5*

FBQ24: Suppose assigns to each negative integer -2 and to each positive integer 2.Then, the domain of is _____
Answer: *{…-2, -1, 1, 2, …}*

FBQ25: The exact area of the piece of land which is bounded by the y-axis on the west, the x-axis in the south, the lake described by the function $$f(x)=100+(\frac{x}{100})^2$$ in the north and the line x=1000 in the east is _____
Answer: *133, 333.33*

FBQ26: The evaluation of is _____
Answer: *8*

FBQ27: The evaluation of is _____
Answer: *-3*

FBQ28: Suppose a certain car supplies a constant deceleration of A meters per second per second. If it is traveling at 90 kilometers per hour (25meters per second) when the brakes are applied, its stopping distance is 50 meters. The value of A is _____
Answer: *6.25*

FBQ29: Suppose a certain car supplies a constant deceleration of A meters per second per second. If it is traveling at 90 kilometers per hour (25meters per second) when the brakes are applied, its stopping distance is 50 meters. _____ metres would the stopping distance have been if the car had been traveling at only 54 kilometers per hour when the brakes wereapplied
Answer: *42*

FBQ30: The evaluation of is _____
Answer: *0*

FBQ31: After its brakes are applied, a certain car decelerates at the constantrate of 6 meters per second per second. If the car is traveling at 108kilometres per hour when the brakes are applied, _____ metres is the distance travelled before coming to a complete stop? (Note: 108 kmph is the same as 30 mps.)
Answer: *75*

FBQ32: Suppose is defined by , then is ----------
Answer: *62*

FBQ33: The evaluation of \(\int_{2}^{5} (2+2t+3t^{2})dt\) is _____

Answer: *144*

FBQ34: The evaluation of definite integral $$\int_{0}^{6} x^{2} (x-1) dx$$ is _____
Answer: *252*

FBQ35: The maximum value of the function is _____
Answer: *9*

FBQ36: The evaluation of is _____
Answer: *-3/4*

FBQ37: A is the region bounded by the curve $$y=4x^{3}$$, the line x=2 and the x-axis. The area under the region is _____
Answer: *16*

FBQ38: The area of the region B is _____ , where B is the region bounded by the curves \(y=x^{2}-2x\) and \(y=1-x^{2}\) between x=-2 and x=1
Answer: *12*

FBQ39: Let \(f(x)=x^{2}-5x+5\), the value \(\frac{(x+\Delta x)-f(x)}{\Delta x}\) as \(\Delta x\) approaches zero is _____
Answer: *2x-4*

FBQ40: The value of $$f(x)=x^{2}-5x+1$$ when x=4 is _____
Answer: *-3*

FBQ41: If $$f(x)=x^{2}-2x+7$$, then f(-5) is _____
Answer: *42*

FBQ42: Given \(f(x)=2x-4\) and \(g(x)=x^{2}+3\), the composite functions \(f(g(x))\)is _____ when x=2
Answer: *6*

FBQ43: Let functions \(f(x)=2x-4\) and \(g(x)=x^{2}+3\), the composite functions \(g(f(x))\) is _____ when \(x=1\)
Answer: *5*

FBQ44: The inverse function of $$f(x)=\sqrt (2x-3)$$ is _____ when x=1
Answer: *2*

FBQ45: The evaluation of $$\lim {x\rightarrow 1} \frac{x^{2}-1}{x-1}$$ is _____
Answer: *2*

FBQ46: The differentiation of y= 2 sin 3x is _____
Answer: *10 cos 5t*

FBQ47: The differential coefficient of y=7 sin 2x-3 cosx is _____
Answer: *14 cos 2x+ 12 sin 4x*

FBQ48: The gradient of the curve $$f(x)=x^{2}$$ at x=2 is _____
Answer: *4*

FBQ49: An alternating voltage is given by: v=100 sin 200t volts, where t is the time in seconds. The rate of change of voltage at t =0.005 s is _____ volts per second
Answer: *10806*

FBQ50: An alternating voltage is given by: v=100 sin 200t volts, where t is the time in seconds. The rate of change of voltage at t =0.01 s is _____ volts per second
Answer: *-8323*

Multiple Choice Questions (MCQs):
MCQ1: If f(x) = x2- 4x+ 3, evaluate f(x+1)
Answer: x2- 2x

MCQ2: Let f(x-3) = x2- 2x+ 7, find f(-1)
Answer: x2+ 7x - 7

MCQ3: Let G(x) = x2+ x - 5, find G(x+2) – G(-x)
Answer: 6x +6

MCQ4: Let H(x) = x2+ 4x - 5, determine H(x+d) – H(x).
Answer: x2+2xd+4d

MCQ5: Let f(x-1) = x2+ 5x- 1, find f(4) +f(-2).
Answer: 28

MCQ6: Let f(x) = 2x – 1 and g(x) =x2- 4, find f (g(x)).
Answer: 2x2 – 9

MCQ7: Let f(x) = 2x – 1 and g(x) =x2- 4, find g (f(x)).
Answer: x2+ 6x +2

MCQ8: Let h(x) = (x+2)sin (x+1) and p(x) =3x-5, find p (h(x)).
Answer: (x+6) sin (3x+1)-5

MCQ9: Let h(x) = (x+2)sin (x+1) and p(x) =3x-5, find h(p(x)).
Answer: (3x-3)sin (3x-4)

MCQ10: Find the inverse of f(x) = 3x +5.
Answer: (5 x-3)/5

MCQ11: Which of the following terms best describe a mapping?
Answer: a transformation

MCQ12: Let be a mapping. The set is called
Answer: range of P

MCQ13:
Answer: domain of H

MCQ14:
Answer: Function of H

MCQ15: find the image set of f .
Answer:

MCQ16: find the range of p.
Answer:

MCQ17: Let be a mapping defined by find the range of
Answer:

MCQ18:
Answer: 4

MCQ19:
Answer: ½

MCQ20: Suppose the total cost in Naira of manufacturing q units of a certain commodity is given by the function C(q) = q3 - 30q2 + 500q + 200. The cost of manufacturing 10 units of the commodity is .....
Answer: N3,200

MCQ21: Let y = x3 be a curve. The equation of the tangent line at the point where x = -1 is y =
Answer: 3x + 2

MCQ22:
Answer:

MCQ23: The position at time t of an object moving along a line is given by s(t) = t3 - 6t2 + 9t + 5. The velocity of the object at t = 1 is
Answer: 0

MCQ24:
Answer:

MCQ25: Differentiate the function e-2x with respect to x.
Answer: -2e-2x

MCQ26: Let y = ln (6x – 4). dy/dx is
Answer:

MCQ27: If f(x) = 2x3 – 4x. Then f(x) is
Answer: odd

MCQ28:
Answer: 17

MCQ29: Let . Suppose f assigns to each negative integer -3 and to each positive integer 3. What is the co-domain of f ?
Answer:

MCQ30: A A function f(x) is called an even function if
Answer: f(-x) = f(x)

MCQ31:
Answer:

MCQ32:
Answer: -1/2

MCQ33:
Answer:

MCQ34:
Answer:

MCQ35:
Answer:

MCQ36:
Answer:

MCQ37: Find if x and y are given by the parametric equations, y = cos4t, x = sin3t
Answer:

MCQ38:
Answer:

MCQ39: find if y = sin2x + 3cos5x
Answer: -4sin2x - 75cos5x

MCQ40: find the value of x at the minimum point of the curve
Answer: 1

MCQ41: Integrate 1/1-x2 with respect to x.
Answer: sin-1x

MCQ42: Find ∫4x3x2+1 dx
Answer: 86x2+13/227

MCQ43: Evaluate ∫013xex2 dx.
Answer: 32(e-1)

MCQ44: Integrate (3x2+2x-1)/x3 with respect to x
Answer: 3lnx-2x+12x2

MCQ45: Obtain ∫(2x+11)10dx
Answer: 2x+51122

MCQ46: Determine: ∫dxx+1(x+2)
Answer: 86lnx6+11

MCQ47: Determine: ∫dxx+1(x+2)
Answer: lnx+1x+2

MCQ48:
Answer: 12π

MCQ49: Evaluate ∫x+1x dx
Answer: 2x13x+1

MCQ50: Integrate sin3xcosx with respect to x
Answer: 14sin4x