



## MATHS

### BOOKS - CENGAGE MATHS (HINGLISH)

#### METHODS OF DIFFERENTIATION

##### Single Correct Answer Type

1. The right hand derivative of  $f(x) = [x]\tan\pi x$  at  $x = 7$  is (where  $[.]$  denotes the greatest integer function) 0 b.  $7\pi$  c.  $-7\pi$  d. none of these

A. 0

B.  $7\pi$

C.  $-7\pi$

D. None of these

**Answer: B**



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2. If  $f(x - y) = f(x) \cdot g(y) - f(y) \cdot g(x)$  and  $g(x - y) = g(x) \cdot g(y) + f(x) \cdot f(y)$  for all  $x \in R$ . If right hand derivative at  $x = 0$  exists for  $f(x)$ . Find the derivative of  $g(x)$  at  $x = 0$

A. -1

B. 0

C. 1

D. none of these

**Answer: B**



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3. If  $xe^{xy} - y = \sin^2 x$  then  $\frac{dy}{dx}$  at  $x = 0$  is

A. 0

B. 1

C.  $-1$

D. none of these

**Answer: B**



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4. Let  $f, g$  and  $h$  are differentiable functions. If  $f(0) = 1; g(0) = 2; h(0) = 3$  and the derivatives of their pair wise products at  $x = 0$  are  $(fg)'(0) = 6; (gh)'(0) = 4$  and  $(hf)'(0) = 5$  then compute the value of  $(fgh)'(0)$ .

A. 2

B. 4

C. 8

D. 16

**Answer: C**



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5. If for a continuous function  $f$ ,  $f(0) = f(1) = 0$ ,  $f'(1) = 2$  and  $y(x) = f(e^x)e^{f(x)}$ , then  $y'(0)$  is equal to a. 1 b. 2 c. 0 d. none of these

A. 1

B. 2

C. 0

D. none of these

**Answer: B**



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6. The derivative of  $\cos\left(2 \tan^{-1} \sqrt{\frac{1-x}{1+x}}\right) - 2 \cos^{-1} \sqrt{\frac{1-x}{2}}$  w.r.t.  $x$

is

A.  $1 - \frac{1}{\sqrt{1-x^2}}$

B.  $1 - \frac{1}{\sqrt{1+x^2}}$

C.  $2 - \frac{1}{\sqrt{1-x^2}}$

D.  $2 - \frac{1}{\sqrt{1+x^2}}$

**Answer: A**



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7. If  $y = \frac{x^2}{2} + \frac{1}{2}x\sqrt{x^2+1} + \ln \sqrt{x + \sqrt{x^2+1}}$  then the value of  $xy' + \log y'$  is

A.  $y$

B.  $2y$

C. 0

D.  $-2y$

**Answer: B**



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8. Let  $g(x) = f(x)\sin x$ , where  $f(x)$  is a twice differentiable function on  $(-\infty, \infty)$  such that  $f(-\pi) = 1$ . The value of  $|g^{-\pi}|$  equals \_\_\_\_\_

A. 1

B. 2

C.  $-2$

D. 0

**Answer: C**



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9. If  $f(x) = \frac{\log_e(\log_e x)}{\log_e x}$ , then  $f'(x)$  at  $x = e$  is

A. 0

B. 1

C.  $e$

D.  $1/e$

Answer: D

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10. Let  $g(x) = e^{f(x)}$  and  $f(x+1) = x + f(x) \forall x \in \mathbb{R}$ . If

$$n \in I^+, \text{ then } \frac{g'(n + \frac{1}{2})}{g(n + \frac{1}{2})} - \frac{g'(\frac{1}{2})}{g(\frac{1}{2})} = 2 \left( 1 + \frac{1}{2} + \frac{1}{3} + \dots + \frac{1}{n} \right)$$

$$2 \left( 1 + \frac{1}{3} + \frac{1}{5} + \frac{1}{2n-1} \right) n^{-1}$$

A.  $2 \left( 1 + \frac{1}{2} + \frac{1}{3} + \dots + \frac{1}{n} \right)$

B.  $2 \left( 1 + \frac{1}{3} + \frac{1}{5} + \dots + \frac{1}{2n-n} \right)$

C. n

D. 1

**Answer: C**

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11.  $\frac{d}{dx} \left[ \cos^{-1} \left( x\sqrt{x} - \sqrt{(1-x)(1-x^2)} \right) \right] =$

A.  $\frac{1}{\sqrt{1-x^2}} - \frac{1}{2\sqrt{x-x^2}}$

B.  $\frac{-1}{\sqrt{1-x^2}} - \frac{1}{2\sqrt{x-x^2}}$

C.  $\frac{1}{\sqrt{1-x^2}} + \frac{1}{2\sqrt{x-x^2}}$

D.  $\frac{1}{\sqrt{1-x^2}}$

**Answer: B**

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12. If  $t(1 + x^2) = x$  and  $x^2 + t^2 = y$ , then at  $x = 2$  the value of  $\frac{dy}{dx}$  is equal to

- A.  $\frac{24}{5}$
- B.  $\frac{101}{125}$
- C.  $\frac{488}{155}$
- D.  $\frac{358}{125}$

**Answer: C**



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13. if  $x = \frac{1+t}{t^3}$ ,  $y = \frac{3}{2t^2} + \frac{2}{t}$  satisfies  $f(x) \cdot \left\{ \frac{dy}{dx} \right\}^3 = 1 + \frac{dy}{dx}$  then

$f(x)$  is:

- A.  $x$
- B.  $\frac{x^2}{1 + X^2}$
- C.  $x + x + \frac{1}{x}$

D.  $x - \frac{1}{x}$

**Answer: A**



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14. Let  $y = x^3 - 8x + 7$  and  $x = f(t)$ . If  $\frac{dy}{dt} = 2$  and  $x = 3$  at  $t = 0$ , then  $\frac{dx}{dt}$  at  $t = 0$  is given by 1 (b)  $\frac{19}{2}$  (c)  $\frac{2}{19}$  (d) none of these

A. 1

B.  $\frac{19}{2}$

C.  $\frac{2}{19}$

D. None of these

**Answer: C**



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15. If  $x = \sec \theta - \cos \theta$  and  $y = \sec^n \theta - \cos^n \theta$  then show that

$$(x^2 + 4) \left( \frac{dy}{dx} \right)^2 = n^2 (y^2 + 4)$$

A. 8

B. 16

C. 64

D. 49

**Answer: C**



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16. The derivative of the function represented parametrically as

$$x = 2t = |t|, y = t^3 + t^2|t| \text{ at } t = 0 \text{ is a. } -1 \text{ b. } 1 \text{ c. } 0 \text{ d. does not exist}$$

A. -1

B. 0

C. 1

D. does not exist

**Answer: B**



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17. If  $y = \tan^{-1}\left(\frac{u}{\sqrt{1-u^2}}\right)$  and  $x = \sec^{-1}\left(\frac{1}{2u^2-1}\right)$ ,  
 $u \in \left(0, \frac{1}{\sqrt{2}}\right) \cup \left(\frac{1}{\sqrt{2}}, 1\right)$ , prove that  $2\frac{dy}{dx} + 1 = 0$ .

A.  $y$

B.  $xy$

C. 0

D. 1

**Answer: C**



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18. The differential coefficient of  $\sin^{-1}\left(\frac{5 \cos x - 4 \sin x}{\sqrt{41}}\right)$  is -2 b. -1 c.

1 d. 2

A. -2

B. -1

C. 1

D. 2

**Answer: D**



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19.  $xy = (x + y)^6$  and  $\frac{dy}{dx} = \frac{y}{x}$  then  $\frac{dy}{dx} =$  1 b. 2 c. 3 d. 4

A. 1

B. 2

C. 3

D. 4

**Answer: B**



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20. If  $x + y = 3e^2$  then  $\frac{d}{dx}(x^y) = 0$  or  $x = e^2$  b.  $e^e$  c.  $e$  d.  $2e^2$

A.  $e$

B.  $e^2$

C.  $e^e$

D.  $2e^2$

**Answer: B**



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21. If  $f(x) = (x - 1)^{100}(x - 2)^{2(99)}(x - 3)^{3(98)} \dots (x - 100)^{100}$ , then the value of  $\frac{f'(101)}{f(101)}$  is

A. 5050

B. 2575

C. 3030

D. 1250

**Answer: A**



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22. The function  $f: \mathbb{R} \rightarrow \mathbb{R}$  satisfies  $f(x^2) \dot{f}^x = f'(x) \dot{f}'(x^2)$  for all real  $x$ .

Given that  $f(1) = 1$  and  $f^1 = 8$ , then the value of  $f'(1) + f^1$  is

2 b. 4 c. 6 d. 8

A. 2

B. 4

C. 6

D. 8

**Answer: C**



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**23.** The second derivative of a single valued function parametrically represented by  $x = \phi(t)$  and  $y = \psi(t)$  (where  $\phi(t)$  and  $\psi(t)$  are different function and  $\phi'(t) \neq 0$ ) is given by

$$\text{A. } \frac{d^2y}{dx^2} = \frac{\left(\frac{dx}{dt}\right)\left(\frac{d^2y}{dt^2}\right) - \left(\frac{d^2x}{dt^2}\right)\left(\frac{dy}{dt}\right)}{\left(\frac{dx}{dt}\right)^3}$$

$$\text{B. } \frac{d^2y}{dx^2} = \frac{\left(\frac{dx}{dt}\right)\left(\frac{d^2y}{dt^2}\right) - \left(\frac{d^2x}{dt^2}\right)\left(\frac{dy}{dt}\right)}{\left(\frac{dx}{dt}\right)^2}$$

$$\text{C. } \frac{d^2y}{dx^2} = \frac{\left(\frac{d^2x}{dt}\right)\left(\frac{dy}{dt}\right) - \frac{dx}{dt}\left(\frac{d^2y}{dt^2}\right)}{\left(\frac{dx}{dt}\right)^3}$$

$$\text{D. } \frac{d^2y}{dx^2} = \frac{\left(\frac{d^2x}{dt}\right)\left(\frac{dy}{dt}\right) - \left(\frac{d^2y}{dt^2}\right)\left(\frac{dy}{dt}\right)}{\left(\frac{dy}{dt}\right)^3}$$



Answer: A

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24. For the curve  $\sin x + \sin y = 1$  lying in first quadrant. If  $\lim_{x \rightarrow 0} x^\alpha \frac{d^2y}{dx^2}$  exists and non-zero then  $2\alpha =$

A. 3

B. 4

C. 5

D. 1

Answer: A

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25. If  $y = \left( \frac{\alpha x + \beta}{\gamma x + \delta} \right)$ , then  $2 \frac{dy}{dx} \cdot \frac{d^3y}{dx^3}$  is

A.  $7\left(\frac{d^2y}{dx^2}\right)^2$

B.  $5\left(\frac{d^2y}{dx^2}\right)^2$

C.  $3\left(\frac{d^2y}{dx^2}\right)^2$

D.  $\left(\frac{d^2y}{dx^2}\right)^2$

**Answer: C**



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26. If  $f(1) = 3$ ,  $f'(1) = 2$ ,  $f''(1) = 4$ , then  $(f^{-1})''(3) =$  (where  $f^{-1}$  = inverse of  $y = f(x)$ )

A. 1

B.  $-\frac{1}{2}$

C. -2

D. None of these

**Answer: B**



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27. If the third derivative of  $\frac{x^4}{(x-1)(x-2)}$  is  $\frac{-12k}{(x-2)^4} + \frac{6}{(x-1)^4}$ ,

then the value of k is

A. 2

B. 4

C. 8

D. 16

Answer: C



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28.  $(a + bx)e^{\frac{y}{x}} = x$ , Prove that  $x^3 \frac{d^2y}{dx^2} = \left(x \frac{dy}{dx} - y\right)^2$

A.  $\left(\frac{dy}{dx} + x\right)^2$

$$B. \left( x \frac{dy}{dx} - y \right)^2$$

$$C. \left( \frac{dy}{dx} - y \right)^2$$

$$D. \left( x \frac{dy}{dx} + y \right)^2$$

**Answer: B**



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29. If  $R = \frac{\left[ 1 + \left( \frac{dy}{dx} \right)^2 \right]^{-3/2}}{\frac{d^2y}{dx^2}}$ , then  $R^{2/3}$  can be put in the form of

$$\frac{1}{\left( \frac{d^2y}{dx^2} \right)^{2/3}} + \frac{1}{\left( \frac{d^2x}{dy^2} \right)^{2/3}}$$

$$b. \frac{1}{\left( \frac{d^2y}{dx^2} \right)^{2/3}} - \frac{1}{\left( \frac{d^2x}{dy^2} \right)^{2/3}}$$

c.

$$\frac{2}{\left( \frac{d^2y}{dx^2} \right)^{2/3}} + \frac{2}{\left( \frac{d^2x}{dy^2} \right)^{2/3}}$$

$$d. \frac{1}{\left( \frac{d^2y}{dx^2} \right)^{2/3}} \frac{1}{\left( \frac{d^2x}{dy^2} \right)^{2/3}}$$

$$A. \frac{1}{\left( \frac{d^2y}{dx^2} \right)^{2/3}} + \frac{1}{\left( \frac{d^2y}{dy^2} \right)^{2/3}}$$

$$B. \frac{1}{\left( \frac{d^2y}{dx^2} \right)^{2/3}} + \frac{1}{\left( \frac{d^2y}{dy^2} \right)^{2/3}}$$

$$C. \frac{2}{\left( \frac{d^2y}{dx^2} \right)^{2/3}} + \frac{2}{\left( \frac{d^2y}{dy^2} \right)^{2/3}}$$

D.  $\frac{1}{\left(\frac{d^2y}{dx^2}\right)^{2/3}} \cdot \frac{1}{\left(\frac{d^2y}{dy^2}\right)^{2/3}}$

**Answer: A**



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30.  $x = 2 \cos t - \cos 2t, y = 2 \sin t - \sin 2t$

A.  $1/2$

B.  $5/2$

C.  $-3/2$

D.  $2$

**Answer: C**



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31. If  $y^3 - y = 2x$ , then  $\left(x^2 - \frac{1}{27}\right) \frac{d^2y}{dx^2} + x \frac{dy}{dx} = y$  b.  $\frac{y}{3}$  c.  $\frac{y}{9}$  d.  $\frac{y}{27}$

A.  $y$

B.  $\frac{y}{3}$

C.  $\frac{y}{9}$

D.  $\frac{y}{27}$

**Answer: C**



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32. Let  $f(x) = \frac{g(x)}{x}$  when  $x \neq 0$  and  $f(0) = 0$ . If  $g(0) = g'(0) = 0$  and  $g''(0) = 17$  then  $f'(0) =$  a.  $3/4$  b.  $-1/2$  c.  $17/3$  d.  $17/2$

A.  $3/4$

B.  $-1/2$

C.  $17/3$

D.  $17/2$

**Answer: D**



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33. Let  $f: (-\infty, \infty) \rightarrow \mathbb{R}$  be a continuous function such that  $f(x+y) = f(x) + f(y) + f(x)f(y), \forall x, y \in \mathbb{R}$ . Also  $f'(0) = 1$ . Then  $[f(2)]$  equal ( $[.]$  represents the greatest integer function) 5 b. 6 c. 7 d. 8

A. 5

B. 6

C. 7

D. 8

Answer: B



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34. Let  $f: \mathbb{R} \rightarrow \mathbb{R}$  be a function satisfying

$$f(x+y) = f(x) + \lambda xy + 3x^2y^2 \text{ for all } x, y \in \mathbb{R}$$

If  $f(3)=4$  and  $f(5)=52$ , then  $f'(x)$  is equal to

A.  $10x$

B.  $-10x$

C.  $20x$

D.  $128x$

**Answer: B**



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35. A function  $f: \mathbb{R} \rightarrow \mathbb{R}$  satisfies the equation  $f(xy) = f(x)f(y) - f(x) - f(y) + 2$ . If differentiable on  $\mathbb{R} - \{0\}$  and  $f(2) = 5$ ,  $f'(x) = \frac{f(x) - 1}{x}$ . Then  $\lambda = 2' f(1)$  b.  $3f'(1)$  c.  $\frac{1}{2}f'(1)$  d.  $f'(1)$

A.  $2f'(1)$

B.  $3f'(1)$

C.  $\frac{1}{2}f'(1)$

D.  $f'(1)$



**Answer: D**



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36. Let  $\frac{f(x+y) - f(x)}{2} = \frac{f(y) - a}{2} + xy$  for all real  $x$  and  $y$ . If  $f(x)$  is differentiable and  $f'(0)$  exists for all real permissible value of  $a$  and is equal to  $\sqrt{5a - 1 - a^2}$ . Then  $f(x)$  is positive for all real  $x$   $f(x)$  is negative for all real  $x$   $f(x) = 0$  has real roots Nothing can be said about the sign of  $f(x)$

- A.  $f(x)$  is positive for all real  $x$
- B.  $f(x)$  is negative for all real  $x$
- C.  $f(x)=0$  has real roots
- D. nothing can be said about the sign of  $f(x)$

**Answer: A**



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37. Let  $f(3) = 4$  and  $f'(3) = 5$ . Then  $\lim_{x \rightarrow 3} [f(x)]$  (where  $[.]$  denotes the greatest integer function) is

- A. 3
- B. 4
- C. 5
- D. non-existent

**Answer: D**



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38. Let  $f(x)$  be a function which is differentiable any number of times and

$f(2x^2 - 1) = 2x^3 f(x), \forall x \in R.$  Then  $f^{(2010)}(0) =$  (Here

$f^{(n)}(x)$  =  $n^{th}$  order derivative of  $f$  at  $x$ )

- A.  $-1$
- B. 1

C. 0

D. data is insufficient

**Answer: C**



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39. If  $f(x) = \begin{vmatrix} (x-a)^4 & (x-a)^3 & 1 \\ (x-b)^4 & (x-b)^3 & 1 \\ (x-c)^4 & (x-c)^3 & 1 \end{vmatrix}$  then

$f'(x) = \lambda \begin{vmatrix} (x-a)^4 & (x-a)^3 & 1 \\ (x-b)^4 & (x-b)^3 & 1 \\ (x-c)^4 & (x-c)^3 & 1 \end{vmatrix}$ . Find the value of  $\lambda$

A. 1

B. 2

C. 3

D. None of these

**Answer: C**



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40. Suppose  $\begin{vmatrix} f'(x) & f(x) \\ f''(x) & f'(x) \end{vmatrix} = 0$  where  $f(x)$  is continuously differentiable function with  $f'(x) \neq 0$  and satisfies  $f(0) = 1$  and  $f'(0) = 2$  then  $\lim_{x \rightarrow 0} \frac{f(x) - 1}{x}$  is

A. 1

B. 2

C. 1/2

D. 0

**Answer: B**

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41. A nonzero polynomial with real coefficient has the property that  $f(x) = f'(x)f'(x)$ . If  $a$  is the leading coefficient of  $f(x)$ , then the value of  $1/2a$  is \_\_\_\_

A.  $1/3$

B. 6

C. 12

D.  $1/18$

**Answer: D**



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42. If  $f'$  is an increasing function from  $\mathbb{R} \rightarrow \mathbb{R}$  such that  $f'' > 0$  and  $f^{-1}$  exists then  $\frac{d^2(f^{-1}(x))}{dx^2}$  is

a.  $< 0$    b.  $> 0$    c.  $= 0$    d. cannot be determined

A.  $< 0$

B.  $> 0$

C. 0

D. cannot be determined

**Answer: A**



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43. Vertices of a variable acute angled triangle ABC lies on a fixed circle. Also  $a, b, c$  and  $A, B, C$  are lengths of sides and angles of triangle ABC, respectively. If  $x_1, x_2$  and  $x_3$  are distances of orthocentre from A, B and C, respectively, then the maximum value of  $\left(\frac{dx_1}{da} + \frac{dx_2}{db} + \frac{dx_3}{dc}\right)$  is

A.  $-\sqrt{3}$

B.  $-3\sqrt{3}$

C.  $\sqrt{3}$

D.  $3\sqrt{3}$

Answer: B



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44. In a question a student was given to find the derivative of the product of two functions  $f$  and  $g$ . The student y misstate thought  $(fg)' = f'g'$

for his question  $f(x) = x^3$  and he got the correct answer. Given that  $g(4) = 1$ . Then which of the following is false?  $g(5) = \frac{1}{8}$  b.  $f'(x) < 0$  c.  $f(0) < 0$  d. none of these

A.  $g(5) = \frac{1}{8}$

B.  $f'(x) < 0$

C.  $f(0) < 0$

D. None of these

**Answer: A**



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45.  $f$  is a strictly monotonic differentiable function with

$f'(x) = \frac{1}{\sqrt{1+x^3}}$ . If  $g$  is the inverse of  $f$ , then  $g^x = \frac{2x^2}{2\sqrt{1+x^3}}$  b.

$\frac{2g^2(x)}{2\sqrt{1+g^2(x)}}$  c.  $\frac{3}{2}g^2(x)$  d.  $\frac{x^2}{\sqrt{1+x^3}}$

A.  $\frac{3x^2}{2\sqrt{1+x^3}}$

B.  $\frac{3g^2(x)}{2\sqrt{1+g^2(x)}}$

C.  $\frac{3}{2}g^2(x)$

D.  $\frac{x^2}{\sqrt{1+x^3}}$

**Answer: C**



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46. Suppose  $f: \mathbb{R} \rightarrow \mathbb{R}^+$  be a differentiable function such that  $3f(x+y) = f(x)f(y) \forall x, y \in \mathbb{R}$  with  $f(1) = 6$ . Then the value of  $f(2)$  is 6 b. 9 c. 12 d. 15

A. 6

B. 9

C. 12

D. 15

**Answer: C**



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### Multiple Correct Answer Type

1. If  $y = \cos^{-1} \sqrt{\frac{\sqrt{1+x^2+1}}{2\sqrt{1+x^2}}}$ , then  $\frac{dy}{dx}$  is equal to  $\frac{1}{2(1+x^2)}$ ,  $x \in R$

(b)  $\frac{1}{2(1+x^2)}$ ,  $x > 0$   $\frac{-1}{2(1+x^2)}$ ,  $x < 0$  (d)  $\frac{1}{2(1+x^2)}$ ,  $x < 0$

A.  $\frac{1}{2(1+x^2)}$ ,  $x \in R$

B.  $\frac{1}{2(1+x^2)}$ ,  $x > 0$

C.  $\frac{1}{2(1+x^2)}$ ,  $x < 0$

D.  $\frac{-1}{2(1+x^2)}$ ,  $x < 0$

**Answer: B::D**

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2. Suppose that  $f(x)$  is differentiable invertible function  $f'(x) \neq 0$  and  $h'(x) = f(x)$ . Given that  $f(1) = f'(1) = 1, h(1) = 0$  and  $g(x)$  is inverse of  $f(x)$ . Let  $G(x) = x^2g(x) - xh(g(x)) \forall x \in R$ . Which of the following is/are correct?  $G'(1) = 2$  b.  $G'(1) = 3$  c.  $G^1 = 2$  d.  $G^1 = 3$

A.  $G''(1) = 2$

B.  $G'(1) = 3$

C.  $G''(1) = 2$

D.  $G''(1) = 3$

**Answer: A::D**



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3. A curve parametrically given by  $x = t + t^3$  and  $y = t^2$ , where  $t \in R$ . For what value(s) of  $t$  is  $\frac{dy}{dx} = ?$

A.  $\frac{1}{3}$

B. 2

C. 3

D. 1

**Answer: A::D**

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4. If  $y = x^{(\log x)^{\log(\log x)}}$ , then  $\frac{dy}{dx}$  is

A.  $\frac{y}{x} \left( \ln x^{\log x - 1} \right) + 2 \ln x \ln(\ln x)$

B.  $\frac{y}{x} (\log x)^{\log(\log x)} (2 \log(\log x) + 1)$

C.  $\left[ (\ln x)^2 + 2 \ln(\ln x) \right]$

D.  $\frac{y}{x} \frac{\log y}{\log x} (2 \log(\log x) + 1)$

**Answer: B::D**

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5. If  $y = e^{-x} \cos x$  and  $y_n + k_n y = 0$  where  $y_n = \frac{d^n y}{dx^n}$  and  $k_n$  are constant  $n \in N$  then

A.  $k_4 = 4$

B.  $k_8 = -16$

C.  $k_{12} = 20$

D.  $k_{16} = -24$

**Answer: A:B**



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6. If  $y = y(x)$  and it follows the relation  $e^{xy} + y \cos x = 2$ , then find (i)  $y'(0)$  and (ii)  $y(0)$ .

A.  $y'(0) = -1$

B.  $y''(0) = 2$

C.  $y'(0) = 3/2$

D.  $y''(0) = -2$

**Answer: A::B**



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7. A twice differentiable function  $f(x)$  is defined for all real numbers and satisfies the following conditions  $f(0) = 2$ ;  $f'(0) = -5$  and  $f''(0) = 3$ . The function  $g(x)$  is defined by  $g(x) = e^{ax} + f(x) \forall x \in R$ , where 'a' is any constant. If  $g'(0) + g(0) = 0$ . Find the value(s) of 'a'

A. 1

B. -1

C. 2

D. -2

**Answer: A::D**



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