

ECAT (Pre-Eng) Mathematics Chapter 18 Basic Concepts & Definitions

Sr	Questions	Answers Choice
1	If $x = at^2$ and $y = 2at$ then $dy/dx =$	A. $2a/y$ B. $y/2a$ C. $-a/2y$ D. $-2y/a$
2	Question Image	A. $-2x$ B. $x^{sup>2</sup>-3</sup>}$ D. $-2x^{sup>3</sup>}$
3	Question Image	
4	If $f(x) = x^{2/3}$ then $f^1(x)$ at $x = 8$ equals:	A. 8 B. $1/8$ C. $1/3$ D. $2/3$
5	Question Image	
6	$d/dx(x^3 + 2x + 3) =$	A. $x^{sup>2</sup> + 2}$ B. $3x + 2$ C. $3x^{sup>2</sup> + 5}$ D. $3x^2 + 2$
7	The derivative of $1/x^m$ is:	A. $x^{sup>m+1</sup>}/m$ B. $m(x)^{sup>m-1</sup>}$ C. $(m-1)x^{sup>-m</sup>}$ D. $m/x^{sup>m+1</sup>}$
8	Question Image	
9	If $y = 1/x^2$ then dy/dx equals:	A. $-2x$ B. $x^{sup>-3</sup>}$ C. $-2/x^{sup>3</sup>}$ D. $-2x^{sup>3</sup>}$
10	If $x = 1 - t^2$ and $y = 3t^2 - 2t^3$ then $dy/dx =$	A. $(1-t)$ B. $3(1+t)$ C. $3(t-1)$ D. $3/1-t$
11	Question Image	B. $x^{sup>n-1</sup>}$
12	if $y = x^2$ then dy/dx equals:	A. $2x$ B. $x/2$ C. $2x^{sup>3</sup>}$ D. $x^{sup>3</sup>/2}$
13	If $y = 3x + 2\cos x$, then $dy/dx =$	A. $3-2\sin x$ B. $3-t\sin x$ C. $3x^{sup>2</sup> - 2\sin x}$ D. $3(1-4\sin x)$
14	Question Image	
15	Question Image	
16	The derivative of \sqrt{x} at $x = a$ is:	A. $1/2a$ B. $2/\sqrt{a}$ C. $2\sqrt{x}$ D. $1/2\sqrt{x}$
17	Question Image	A. $2x$ B. $x/2$ C. $2x^{sup>3</sup>}$ D. $x^{sup>3</sup>/2}$
18	If $f(x) = c$ then $f^1(x)$ equals:	A. 1 B. 0 C. cx D. c
19	Question Image	

20

If $x^2 + y^2 = 1$, then dy/dx

- A. y/x
 - B. $-x/y$
 - C. $1/x$
 - D. None of these
-