MATH 1551 Differential Calculus: Applications of Derivatives

1. What is the derivative of y = x^2?

A. 2x
B. x^2
C. x

2. What is the derivative of y = sin(x)?

A. cos(x)
B. sin(x)
C. tan(x)

3. What is the derivative of y = e^x?

A. e^x
B. ln(x)
C. x

4. What is the derivative of y = ln(x)?

A. 1/x
B. ln(x)
C. x

5. What is the derivative of y = cos(x)?

A. -sin(x)
B. cos(x)
C. tan(x)

6. What is the derivative of y = tan(x)?

A. sec^2(x)
B. tan(x)
C. cos(x)

7. What is the derivative of y = csc(x)?

A. -csc(x)cot(x)
B. csc(x)
C. cot(x)

8. What is the derivative of y = sec(x)?

A. sec(x)tan(x)
B. sec(x)
C. tan(x)

9. What is the derivative of y = cot(x)?

A. -csc^2(x)
B. cot(x)
C. csc(x)

10. What is the derivative of y = arcsin(x)?

A. 1/sqrt(1-x^2)
B. arcsin(x)

C. x

11. What is the derivative of y = arccos(x)?

A. -1/sqrt(1-x^2)
B. arccos(x)
C. x

12. What is the derivative of y = arctan(x)?

A. 1/(1+x^2)
B. arctan(x)
C. x

13. What is the derivative of y = arccsc(x)?

A. -1/sqrt(x^2-1)
B. arccsc(x)
C. x

14. What is the derivative of y = arcsec(x)?

A. 1/sqrt(x^2-1)
B. arcsec(x)
C. x

15. What is the derivative of y = arccot(x)?

A. -1/(1+x^2)
B. arccot(x)
C. x

16. What is the derivative of y = sinh(x)?

A. cosh(x)
B. sinh(x)
C. tanh(x)

17. What is the derivative of y = cosh(x)?

A. sinh(x)
B. cosh(x)
C. tanh(x)

18. What is the derivative of y = tanh(x)?

A. sech^2(x)
B. tanh(x)
C. cosh(x)

19. What is the derivative of y = sech(x)?

A. -sech(x)tanh(x)
B. sech(x)
C. tanh(x)

20. What is the derivative of y = csch(x)?

A. -csch(x)coth(x)
B. csch(x)
C. coth(x)

21. What is the derivative of y = coth(x)?

A. -csch^2(x)
B. coth(x)
C. csch(x)

22. What is the derivative of y = arcsinh(x)?

A. 1/sqrt(1+x^2)
B. arcsinh(x)
C. x

23. What is the derivative of y = arccosh(x)?

A. 1/sqrt(x^2-1)
B. arccosh(x)
C. x

24. What is the derivative of y = arctanh(x)?

A. 1/(1-x^2)
B. arctanh(x)
C. x

25. What is the derivative of y = arccsch(x)?

A. -1/sqrt(x^2+1)
B. arccsch(x)
C. x

26. What is the derivative of y = arcsech(x)?

A. -1/sqrt(1-x^2)
B. arcsech(x)
C. x

27. What is the derivative of y = arccoth(x)?

A. -1/(1-x^2)
B. arccoth(x)
C. x

1. A
2. A
3. A
4. A
5. A
6. A
7. A
8. A
9. A
10. A
11. A
12. A

13. A
14. A
15. A
16. A
17. A
18. A
19. A
20. A
21. A
22. A
23. A
24. A
25. A
26. A
27. A