MATH 2552 Differential Equations: Applications of differential equations

1. What is a differential equation?

A. An equation that relates a function to its derivatives

B. An equation that relates two functions

C. An equation that relates a function to its integral

D. An equation that relates a function to its domain

2. What is the order of a differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

3. What is the degree of a differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

4. What is a linear differential equation?

A. An equation in which the derivatives are of the first degree

B. An equation in which the derivatives are of the second degree

C. An equation in which the derivatives are of the same degree

D. An equation in which the derivatives are of different degrees

5. What is a homogeneous differential equation?

A. An equation in which the derivatives are of the first degree

B. An equation in which the derivatives are of the second degree

C. An equation in which the derivatives are of the same degree

D. An equation in which the derivatives are of different degrees

6. What is a nonhomogeneous differential equation?

A. An equation in which the derivatives are of the first degree

B. An equation in which the derivatives are of the second degree

C. An equation in which the derivatives are of the same degree

D. An equation in which the derivatives are of different degrees

7. What is the general solution of a differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

8. What is a particular solution of a differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

9. What is the order of a linear differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

10. What is the degree of a linear differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

11. What is the order of a homogeneous linear differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

12. What is the degree of a homogeneous linear differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

13. What is the order of a nonhomogeneous linear differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

14. What is the degree of a nonhomogeneous linear differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

15. What is the general solution of a linear differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

16. What is the general solution of a homogeneous linear differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

17. What is the general solution of a nonhomogeneous linear differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

18. What is a particular solution of a linear differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

19. What is a particular solution of a homogeneous linear differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

20. What is a particular solution of a nonhomogeneous linear differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

21. What is the order of a constant coefficient linear differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

22. What is the degree of a constant coefficient linear differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

23. What is the order of a variable coefficient linear differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

24. What is the degree of a variable coefficient linear differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

25. What is the general solution of a constant coefficient linear differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

26. What is the general solution of a variable coefficient linear differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

27. What is the order of a separable differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

28. What is the degree of a separable differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

29. What is the order of a linear separable differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

30. What is the degree of a linear separable differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

31. What is the order of a homogeneous linear separable differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

32. What is the degree of a homogeneous linear separable differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

33. What is the order of a nonhomogeneous linear separable differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

34. What is the degree of a nonhomogeneous linear separable differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

35. What is the general solution of a separable differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

36. What is the general solution of a linear separable differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

37. What is the general solution of a homogeneous linear separable differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

38. What is the general solution of a nonhomogeneous linear separable differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

39. What is a particular solution of a separable differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

40. What is a particular solution of a linear separable differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

41. What is a particular solution of a homogeneous linear separable differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

42. What is a particular solution of a nonhomogeneous linear separable differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

43. What is the order of an exact differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

44. What is the degree of an exact differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

45. What is the order of a linear exact differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

46. What is the degree of a linear exact differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

47. What is the order of a homogeneous linear exact differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

48. What is the degree of a homogeneous linear exact differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

49. What is the order of a nonhomogeneous linear exact differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

50. What is the degree of a nonhomogeneous linear exact differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation

C. The number of derivatives that appear in the equation

D. The number of variables that appear in the equation

51. What is the general solution of an exact differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

52. What is the general solution of a linear exact differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

53. What is the general solution of a homogeneous linear exact differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

54. What is the general solution of a nonhomogeneous linear exact differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

55. What is a particular solution of an exact differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

56. What is a particular solution of a linear exact differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

57. What is a particular solution of a homogeneous linear exact differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

58. What is a particular solution of a nonhomogeneous linear exact differential equation?

A. The solution that contains all the arbitrary constants

B. The solution that contains no arbitrary constants

C. The solution that contains all the particular solutions

D. The solution that contains all the solutions

59. What is the order of a Bernoulli differential equation?

A. The highest derivative that appears in the equation

B. The lowest derivative that appears in the equation