1. Attributes are descriptive information associated with geographic features.
   - True
   - False

2. On a GIS map, how can geographic objects be represented?
   - Points
   - Lines
   - Polygons
   - All of the above

3. In data view, you can view more than one data frame at a time.
   - True
   - False

4. In the graphic below, the blue polygons have a spatial relationship with the red polygon. What is their spatial relationship?
   - Containment
   - Adjacency
   - Intersection
   - Distance

5. You can access information associated with a map feature by performing all of the following tasks, except one. Which one?
   - Using the Identify tool
   - Zooming
   - Opening its layer attribute table
   - Using a hyperlink

6. To select cities that are within 25 km of a river, which operation would you use?
   - Select By Location
   - Identify
   - Select By Attributes
   - Union

7. To create a zone of a specific distance around a feature, which tool would you use?
   - Identify
   - Measure
   - Union
   - Buffer

8. Which of the following is true about large-scale maps?
   - You can zoom in closer on small-scale maps than you can on large-scale maps.
   - You can zoom in closer on large-scale maps than you can on small-scale maps.
   - They show a larger area of the earth's surface than small-scale maps.
   - They show a smaller area of the earth's surface than small-scale maps.

9. Which ArcGIS application would you use to explore and edit geographic data?
   - ArcMap
   - ArcData
   - ArcToolbox
   - ArcCatalog

10. You can access ArcToolbox from both ArcCatalog and ArcMap.
    - True
    - False
11. When represented on a GIS map, all features have which of the following characteristics?
   - A location, shape, and symbol
   - A shape, scale, and area
   - A symbol, point, and area
   - An attribute, location, and length

12. According to this classification histogram, which class contains the attribute value with the highest frequency?
   - 2.00 - 2.38
   - 2.38 - 2.74
   - 2.74 - 3.19
   - 3.19 - 6.00

13. All of the following example attributes contain categories, except one. Which one?
   - Rank: 1, 2, 3, 4, 5
   - Vegetation: forest, grassland, marsh
   - Diameter: 15, 21, 39, 42
   - Toll road: Yes, No

14. For point features, you can modify all of the symbol properties below, except one. Which one?
   - Size
   - Angle
   - Color
   - Fill pattern

15. If you want to label a feature on a map but you don’t have the feature in your database, which option below can you use?
   - Map tip
   - Interactive feature label
   - Dynamic feature label
   - Annotation

16. Normalization is the process of dividing one numeric attribute value by another and then mapping the resulting values.
   - True
   - False

17. On a map of property values, if you wanted to make sure that one of the class breaks occurred at 1 million dollars, which classification method below would you choose?
   - Natural breaks
   - Manual
   - Equal interval
   - Quantile

18. One way to distinguish features within a layer is to symbolize them according to an attribute.
   - True
   - False

19. What three things must you decide when symbolizing a quantity attribute in ArcMap?
   - The number of features to show, the size of the symbols, and the color of the symbols
   - The classification method, the number of classes, and the number of layers
   - The layer, the attribute, and the number of classes
   - The type of symbology to use, the classification method, and the number of classes
20. When using dots to represent quantities, all of the following statements are true, except one. Which one?
   ☐ Each dot represents a specific count or amount.
   ☐ The more dots in an area, the greater the quantity.
   ☐ The closer the dots are together, the greater the density.
   ☐ The dots are associated with feature locations.

21. Which legend type would you use if you wanted to group world countries into total population categories?
   ☐ Dot density
   ☐ Single symbol
   ☐ Graduated colors
   ☐ Unique values

22. Why might you create a layer file?
   ☐ To save the layer.
   ☐ To print the map.
   ☐ To create feature labels.
   ☐ To be able to easily reuse the layer's symbology on other maps.

23. You are symbolizing a polygon layer with graduated colors according to some attribute. Some of the polygons are large, while others are small. What can you do to make sure the patterns on your map are not simply a reflection of the different polygon sizes?
   ☐ Use at least seven classes
   ☐ Symbolize by unique values instead of graduated colors
   ☐ Choose a color ramp with lighter colors
   ☐ Normalize the attribute by area to map density

24. You're mapping all the schools within a county. The schools attribute table does not have a field that contains the school names. You can label the schools with their names anyway.
   ☐ True
   ☐ False

25. A datum that is accurate for North America is likely to be accurate for Europe.
   ☐ True
   ☐ False

26. A projected coordinate system consists of all the following components, except one. Which one?
   ☐ A spheroid
   ☐ An origin
   ☐ An x and y axis
   ☐ A linear unit of measure

27. A sphere and a spheroid are common shapes used to approximate the shape of the earth.
   ☐ True
   ☐ False

28. All of the following statements are true about a datum, except one. Which one?
   ☐ A datum defines the origin of a geographic coordinate system.
   ☐ A datum specifies the location where the spheroid touches the earth's surface.
   ☐ A datum specifies which spheroid is being used.
   ☐ A datum specifies the origin of a Cartesian coordinate system.

29. All of the statements below are true about the shape of the earth, except one. Which one?
   ☐ There is more than one model of the shape of the earth.
   ☐ Many estimates of the shape of the earth have been made over the years.
   ☐ Regardless of which model of the earth you use, latitude-longitude values for individual locations are the same.
   ☐ A spheroid is a more accurate model of the earth's shape than a sphere.
30. Examine the map below. What type of surface is the map projection based on?

- Cone
- Cylinder
- Plane
- Sphere

31. In ArcMap, display units are independent of map units.

- True
- False

32. Suppose that some of your data is in a geographic coordinate system and some of your data is projected. You want to display this data in the same map. What factor determines whether your data will line up correctly?

- The map units are decimal degrees.
- All the data has a common geographic coordinate system.
- The geographic coordinate system is based on a spheroid rather than a sphere.
- The datum aligns the spheroid with the surface of the earth for your region.

33. Suppose you have several layers of data that you want to add to ArcMap. All the data has a common geographic coordinate system. One of the layers is in an Equidistant Conic projection. You would like to view all the layers in this projection. All of the following methods below would set the data frame to the Equidistant Conic projection, except one. Which one?

- Add the layers in a geographic coordinate system first, then add the projected layer.
- Add all the layers to the data frame, then apply the Equidistant Conic projection to the data frame.
- Set the data frame to Equidistant Conic, then add all the layers.
- Add the layer in the Equidistant Conic projection to the empty data frame, then add the remaining layers.

34. Suppose you wrap a cylinder around the earth so that it touches along the equator. Then, you project a light source through the globe onto the cylinder. Which of the following statements best describes the resulting map?

- The map will be accurate in the equatorial zone.
- The map will be accurate in the mid-latitude zone.
- The map will be accurate in the polar region.
- The map will not be accurate in any zone.

35. What is the term for a reference system that identifies locations on the surface of the earth?

- Prime meridian
- Spheroid
- Degrees
- Geographic coordinate system

36. When choosing a map projection, all of the following considerations are important, except one. Which one?

- The spatial property you want to preserve
- The purpose of the map
- The particular portion of the earth being mapped
- The display units used to measure features
37. When you want to use a dataset that has an unknown spatial reference, you should try to track down the source of the data to find out what the coordinate system is.
   - True
   - False

38. When you're working at a large scale, almost any map projection that is centered on your area of interest will be fine.
   - True
   - False

39. You have been given a map document and the associated data. The data is in different coordinate systems, some projected and some not. You want to use the map in a presentation, but you don't know which coordinate system the map uses. How can you quickly determine the coordinate system of the map?
   - Create a new map document and add the data one layer at a time.
   - In ArcMap, check the layer properties for each layer.
   - In ArcMap, check the data frame properties.
   - In ArcCatalog, examine the metadata for each layer.

40. A geodatabase feature class can store features with different geometry types.
   - True
   - False

41. All of the following are file extensions associated with a shapefile, except one. Which one?
   - .shx
   - .mdb
   - .dbf
   - .shp

42. All of the following are important questions to ask when designing a geodatabase, except one. Which one?
   - How do I add my data to the geodatabase?
   - What will the geodatabase be used for?
   - What data layers are needed?
   - How should attributes be stored?

43. All of the following elements can be stored in a geodatabase, except one. Which one?
   - Feature class
   - Annotation
   - Nonspatial table
   - Coverage

44. All of the following terms can be used to describe the vector data model, except one. Which one?
   - Points, lines, and polygons
   - Well-defined boundaries
   - X,y coordinates
   - Equally sized cells

45. An image is a type of vector data.
   - True
   - False

46. Enterprise geodatabases are appropriate for organizations where many people need to edit data.
   - True
   - False

47. Geodatabases, shapefiles, and coverages organize geographic data into feature classes.
   - True
   - False
48. In ArcCatalog, you can determine the data format of a feature class by using the Contents tab.

   ☐ True
   ☐ False

49. Suppose you are creating a feature dataset. What is an easy way to define its spatial reference?

   ☐ Import the spatial reference from one of the feature classes that will be added to the feature dataset.
   ☐ Define the spatial reference yourself.
   ☐ Select a predefined geographic or projected coordinate system.
   ☐ Import the spatial reference from the geodatabase.

50. Suppose you want to combine features from different feature classes into one feature class. Which method is most appropriate to use?

   ☐ Load
   ☐ Copy
   ☐ Import
   ☐ Add

51. To import data from a geodatabase feature class, a shapefile, and a coverage into a geodatabase feature class, you need to import the datasets one at a time.

   ☐ True
   ☐ False

52. What are three methods of adding data to a geodatabase?

   ☐ Load, Insert, and Copy
   ☐ Import, Load, and Copy
   ☐ Copy, Import, and Add
   ☐ Import, Add, and Copy

53. Which of the following is true about feature datasets?

   ☐ Feature datasets can store feature classes with different geometry types.
   ☐ Feature classes grouped into a feature dataset don't have a spatial relationship with one another.
   ☐ Feature datasets can store feature classes that have different coordinate systems.
   ☐ Feature datasets are also called nonspatial tables.

54. You look into the phone book and see names associated with addresses and phone numbers. Wow, you think, this is geographic data!

   ☐ True
   ☐ False

55. A map topology maintains spatial relationships among features in one or more layers.

   ☐ True
   ☐ False

56. All of the following items can be used as a base layer for heads-up digitizing, except one. Which one?

   ☐ GIS layers
   ☐ Digital aerial photos
   ☐ Tables of x,y coordinates
   ☐ Scanned hard-copy maps

57. All of the following operations can be performed in the Field Calculator, except one. Which one?

   ☐ Add, subtract, multiply, or divide numeric values
   ☐ Concatenate (string together) values from multiple text fields
   ☐ Select features and attributes
   ☐ Create a text string
58. All of the following tasks are steps in the editing process, except one. Which one?

- Symbolize features
- Set the target layer
- Start an edit session
- Select features

59. All of the following techniques can be used to move a vertex, except one. Which one?

- Move the vertex to particular x,y coordinates
- Drag the vertex to a particular location
- Move the vertex by a specified distance
- Copy/paste the vertex to a new location

60. All of the following tools can be used to select a feature in an edit session, except one. Which one?

- Select Elements tool
- Edit tool
- Select Features tool
- Select By Attributes dialog

61. All the following procedures involve modifying a feature's edit sketch, except one. Which one?

- Moving features
- Deleting vertices
- Inserting vertices
- Moving vertices

62. In ArcMap, you can set all of the following elements as snapping agents, except one. Which one?

- End
- Vertex
- Pixel
- Edge

63. In order to create point features from a table of x,y coordinates, which of the following must be true about the table?

- The table must be saved as a space-delimited text file.
- The table must be saved as a .csv file.
- The table must contain fields for the x,y coordinates and fields for latitude and longitude coordinates.
- The table must contain separate fields for the x and y coordinates.

64. Suppose you are creating a new telephone line feature and you want to make sure that it connects to the existing telephone lines as well as to the telephone poles. What snapping agents would you set?

- End of telephone lines, and Vertex of telephone poles
- Vertex and End of telephone lines, and Vertex of telephone poles
- Start and End of telephone lines, and Vertex of telephone poles
- Vertex of telephone poles

65. The graphic below shows two feature classes: power lines and utility poles. The two feature classes should be edited using topology.

- True
- False

66. To edit attributes in the Attributes dialog, you can perform all of the following operations, except one. Which one?

- Copy and paste
- Type in
- Calculate
- Delete

67. What is the term for the distance within which the mouse pointer snaps to a vertex, edge, or end of a feature?

- Snapping radius
- Snapping tolerance
- Snapping agent
- Snapping distance
68. When digitizing a polygon feature, you need to use snapping to connect the vertex of the end point to the vertex of the start point.
- True
- False

69. When you create point features from a table of x,y coordinates, ArcMap automatically saves the event layer as a new feature class.
- True
- False

70. You can use the Attributes dialog outside an edit session to view the attributes of a selected feature.
- True
- False

71. You have just digitized a new street feature and you want to assign a NAME attribute to it. Where would you do this?
- Attributes dialog
- Layer Properties dialog
- Select By Attributes
- Metadata tab

72. Raster data can be stored in an enterprise geodatabase and referenced by a personal geodatabase.
- True
- False

73. If several people in an organization need to be able to edit the organization's GIS data simultaneously, storing the data in a personal geodatabase is a better choice than storing the data in an enterprise geodatabase.
- True
- False

74. If you want to preserve the spatial relationships among certain feature classes stored in a geodatabase, which of the following would you create?
- Geodatabase topology
- Enterprise geodatabase
- Nonspatial table
- Relationship class

75. What does a raster catalog contain?
- One seamless raster image
- A collection of features
- A collection of rasters
- A collection of feature classes

76. What is one reason to create a feature dataset?
- You want to store topologically related feature classes.
- You want to store raster data.
- You want to create feature classes in different coordinate systems.
- You want to create a feature class.

77. Which of the following statements is true about viewing rasters in a raster catalog?
- They must have the same spatial reference.
- They must have the same cell size.
- They must be in ERDAS IMAGINE format.
- They must have the same data format.

78. If you wanted to know the names of all the feature classes contained in a geodatabase, where would you find this information?
- In the ArcMap Table of Contents Source tab
- In the ArcCatalog Catalog tree
- In the Feature Class Properties dialog in ArcCatalog
- In the Geodatabase Properties dialog in ArcCatalog
79. Yesterday, you created a raster catalog and chose to have it managed by the geodatabase. Today, you move the geodatabase to a different folder on your local machine. Which of the following statements is true?
- You can preview the raster catalog in ArcCatalog but it does not display in ArcMap.
- The raster catalog is deleted.
- You can no longer preview the raster catalog in ArcCatalog.
- You can preview the raster catalog the same as yesterday.

80. Suppose you have a parcels feature class and a nonspatial table containing owner data for each parcel. If a parcel is deleted, you want the corresponding record in the parcel owner table to be deleted as well. Which geodatabase object provides this functionality?
- Relationship class
- Feature dataset
- Geodatabase topology
- Geometric network

81. Which of the following is a primary component of a personal geodatabase?
- Geometric network
- Relationship class
- Map topology
- Feature dataset

82. A single geodatabase feature class may contain which of the following?
- Point, line, or polygon features
- Line and polygon features
- Point and line features
- Polygon features and rasters

83. To create and work with an enterprise geodatabase, you need to have a database management system and which of the following?
- ArcSDE
- ArcObjects
- ArcToolbox
- Microsoft Access

84. A raster dataset is always managed by the geodatabase.
- True
- False

85. What does a raster catalog contain?
- A collection of features
- A collection of feature classes
- One seamless raster image
- A collection of rasters

86. All of the following statements are true about a nonspatial table, except one. Which one?
- A nonspatial table can participate in a relationship class.
- A nonspatial table can be previewed in ArcCatalog.
- A nonspatial table can store user-defined attributes.
- A nonspatial table has a Shape field.

87. What is the name for a geodatabase table that stores feature geometry?
- Feature class table
- Feature dataset table
- Nonspatial table
- Geometric network table

88. You've just created a new feature class in a geodatabase. What is one way to add features to this new feature class?
- Use the Feature Class Properties dialog in ArcCatalog
- Use the Geodatabase Properties dialog in ArcCatalog
- Use the Validate Features function in ArcMap
- Use the editing functions in ArcMap