ALEKS Pre-Test

**Section 1**

For questions 1-15 simplify.

|  |  |
| --- | --- |
| 1. | 2. |
| 3. | 4. |
| 5. | 6. |
| 7. | 8. Write answer as a whole number plus a remainder. |
| 9. | 10. |
| 11. | 12. |
| 13. | 14. |
| 15. Do not use a remainder. Divide until you reach the complete decimal answer. |  |

**Section 2**

For questions 16-19 simplify.

|  |  |
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| 16. | 17. |
| 18. | 19. |

|  |  |
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| 20. Place on the number line. | 21. Write 5 as an improper fraction. |
| 22. Write as a mixed number. | 23. Fill in the box with the correct symbol  (either < or >) |
| 24. Solve. | 25. Solve. |
| 26. Solve. |  |

**Section 3**

|  |  |
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| 27. Write as a percent. | 28. Write as a fraction in simplest form. |
| 29. What is of 85? | 30. A shirt is off of $24. What is the cost after the discount? |

**Section 4**

For questions 31-34 simplify.

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| 31. | 32. |
| 33. | 34. Write in scientific notation. |

**Section 5**

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| 35. Given rectangle ABCD, , , with a perimeter of 80 units. Find CD. | 36. Given triangle ABC with height AD, , , and . Find the area.    A  D  C  B |
| 37. Given parallelogram ABCD, find the area.  5  3  4  A  B  C  D | 38. Given a circle with a diameter of 12, find the area and circumference. Leave your answers in terms of . |
| 39. Find the volume and surface area of the rectangular prism.  mage result for rectangular prism  mage result for vertical angles similar triangles | 40. Find the volume and surface area of the cylinder. Leave your answers in terms of .  mage result for cylinder |
| Use the diagram below to answer questions 41-44.  A  D  E  B  C | 41. Find .  42. Find .  43. Find .  44. Is ? |

**Section 6**

|  |  |
| --- | --- |
| 45. Simplify | 46. Evaluate if |
| 47. Solve. | 48. Solve. |
| 49. Translate the sentence into an algebraic equation and then solve.  Twice the sum of a number and 8 is the same as 4 less than the number. | 50. Solve for a. . |
| 51. Solve then graph the answer on a number line. | 52. Solve then graph the answer on a number line.  and |
| 53. Solve. |  |

**Section 7**

|  |  |
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| 54.  a. Graph    b. Write an equation that is perpendicular to | 55. Graph. |
| 56. Graph. | 57. Graph. |
| 58. Write a linear equation in slope-intercept form that passes through and . | 59. Write a linear equation in slope-intercept form given the graph below. |
| 60. Find the x-intercepts and y-intercepts given | 61. Solve the system of equations. |
| 62. Solve the system of equations. |  |

**Section 8**

|  |  |
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| 63. Given and  Find | 64. Given , find . |
| Use the diagram below to answer  questions 65 and 66. | 65. Does the graph represent a function?  66. Determine the domain and range. |

**Section 9**

|  |  |
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| 67. Simplify | 68. Use Pythagorean theorem to find the missing side length.  11  8 |
| 69. Find the distance between and . |  |

**Section 10**

|  |  |
| --- | --- |
| 70. Simplify | 71. Simplify |
| 72. Factor | 73. Factor |
| 74. Factor | 75. Solve using the quadratic formula. |
| 76. Graph |  |