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**Name:** **ID:** 

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**Keystone Algebra 1 Review Module 2 2**

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| --- |
| **Multiple Choice***Identify the choice that best completes the statement or answers the question.* |
|  | 1.  | A rectangle has an area of 24 square units. The width is 5 units less than the length. What is the length, in units, of the rectangle?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | 6 | c. | 3 |
| b. | 8 | d. | 19 |

 |
|  | 2.  | The bowling team at Lincoln High School must choose a president, vice president, and secretary. If the team has 10 members, which expression could be used to determine the number of ways the officers could be chosen?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | mc002-1.jpg | c. | mc002-3.jpg |
| b. | mc002-2.jpg | d. | mc002-4.jpg |

 |
|  | 3.  | The table below shows a cumulative frequency distribution of runners’ ages.

|  |  |
| --- | --- |
| Age Group | Total |
| 20-29 | 8 |
| 20-39 | 18 |
| 20-49 | 25 |
| 20-59 | 31 |
| 20-69 | 35 |
|  |  |

According to the table, how many runners are in their forties?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | 25 | c. | 7 |
| b. | 10 | d. | 6 |

 |
|  | 4.  | Mr. Turner bought *x* boxes of pencils. Each box holds 25 pencils. He left 3 boxes of pencils at home and took the rest to school. Which expression represents the total number of pencils he took to school?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | mc004-1.jpg | c. | mc004-3.jpg |
| b. | mc004-2.jpg | d. | mc004-4.jpg |

 |
|  | 5.  | Lenny made a cube in technology class. Each edge measured 1.5 cm. What is the volume of the cube in cubic centimeters?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | 2.25 | c. | 9.0 |
| b. | 3.375 | d. | 13.5 |

 |
|  | 6.  | Which value of *p* is the solution of mc006-1.jpg?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | mc006-2.jpg | c. | 3 |
| b. | mc006-3.jpg | d. | 7 |

 |
|  | 7.  | The statement 2 + 0 = 2 is an example of the use of which property of real numbers?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | associative | c. | additive inverse |
| b. | additive identity | d. | distributive |

 |
|  | 8.  | Mrs. Smith wrote “Eight less than three times a number is greater than fifteen” on the board. If *x* represents the number, which inequality is a correct translation of this statement?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | mc008-1.jpg | c. | mc008-3.jpg |
| b. | mc008-2.jpg | d. | mc008-4.jpg |

 |
|  | 9.  | There is a negative correlation between the number of hours a student watches television and his or her social studies test score. Which scatter plot below displays this correlation?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | mc009-1.jpg | c. | mc009-3.jpg |
| b. | mc009-2.jpg | d. | mc009-4.jpg |

 |
|  | 10.  | When mc010-1.jpgis subtracted from mc010-2.jpg, the difference is

|  |  |  |  |
| --- | --- | --- | --- |
| a. | mc010-3.jpg | c. | mc010-5.jpg |
| b. | mc010-4.jpg | d. | mc010-6.jpg |

 |
|  | 11.  | Factored completely, the expression mc011-1.jpgis equivalent to

|  |  |  |  |
| --- | --- | --- | --- |
| a. | mc011-2.jpg | c. | mc011-4.jpg |
| b. | mc011-3.jpg | d. | mc011-5.jpg |

 |
|  | 12.  | Factored, the expression mc012-1.jpgis equivalent to

|  |  |  |  |
| --- | --- | --- | --- |
| a. | mc012-2.jpg | c. | mc012-4.jpg |
| b. | mc012-3.jpg | d. | mc012-5.jpg |

 |
|  | 13.  | What is the product of mc013-1.jpgand mc013-2.jpg?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | mc013-3.jpg | c. | mc013-5.jpg |
| b. | mc013-4.jpg | d. | mc013-6.jpg |

 |
|  | 14.  | Which value of *x* makes the expression mc014-1.jpgundefined?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | -4 | c. | 3 |
| b. | -3 | d. | 0 |

 |
|  | 15.  | Which expression represents mc015-1.jpgin simplest form?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | mc015-2.jpg | c. | mc015-4.jpg |
| b. | mc015-3.jpg | d. | mc015-5.jpg |

 |
|  | 16.  | What is the product of mc016-1.jpgand mc016-2.jpgexpressed in simplest form?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | mc016-3.jpg | c. | mc016-5.jpg |
| b. | mc016-4.jpg | d. | mc016-6.jpg |

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|  | 17.  | A swim team member performs a dive from a 14-foot high springboard. The parabola shows the path of her dive.mc017-1.jpgWhich equation represents the axis of symmetry?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | x = 3 | c. | x = 23 |
| b. | y = 3 | d. | y = 23 |

 |
|  | 18.  | Which expression represents mc018-1.jpgin simplest form?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | 0 | c. | 4x |
| b. | 2x | d. | 2x + 2 |

 |
|  | 19.  | Consider the graph of the equation mc019-1.jpg, when mc019-2.jpg. If *a* is multiplied by 3, what is true of the graph of the resulting parabola?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | The vertex is 3 units above the vertex of the original parabola. | c. | The new parabola is wider than the original parabola. |
| b. | The new parabola is 3 units to the right of the original parabola. | d. | The new parabola is narrower than the original parabola. |

 |
|  | 20.  | What are the vertex and the axis of symmetry of the parabola shown in the diagram below?mc020-1.jpg

|  |  |  |  |
| --- | --- | --- | --- |
| a. | The vertex is (-2, -3) and the axis of symmetry is mc020-2.jpg. | c. | The vertex is (-3, -2) and the axis of symmetry is mc020-4.jpg. |
| b. | The vertex is (-2, -3) and the axis of symmetry is mc020-3.jpg. | d. | The vertex is (-3, -2) and the axis of symmetry is mc020-5.jpg. |

 |
|  | 21.  | What is the product of mc021-1.jpgandmc021-2.jpg expressed in simplest form?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | mc021-3.jpg | c. | mc021-5.jpg |
| b. | mc021-4.jpg | d. | mc021-6.jpg |

 |
|  | 22.  | Is the equation mc022-1.jpgequivalent to mc022-2.jpg?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | Yes, the equations are equivalent by the Associative Property of Multiplication. | c. | Yes, the equations are equivalent by the Distributive Property of Multiplication. |
| b. | Yes, the equations are equivalent by the Commutative Property of Multiplication. | d. | No, the equations are not equivalent. |

 |
|  | 23.  | mc023-1.jpg

|  |  |  |  |
| --- | --- | --- | --- |
| a. | 4 | c. | 9 |
| b. | 6 | d. | 10 |

 |
|  | 24.  | Which expression is equivalent to mc024-1.jpg?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | mc024-2.jpg | c. | mc024-4.jpg |
| b. | mc024-3.jpg | d. | mc024-5.jpg |

 |
|  | 25.  | 1. Which number does not have a reciprocal?

|  |  |  |  |
| --- | --- | --- | --- |
| a. | -1 | c. | mc025-1.jpg |
| b. | 0 | d. | 3 |

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