**Question 1** Standard: A1.SSE.A.1 Blooms: Understand DOK: 1 Total Points: 1

Points Scored:

Points Possible: 52

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Write a verbal expression below for the algebraic expression:

a2 + 23a

|  |
| --- |
| Answer: |

**Question 2** Standard: A1.SSE.A.1 Blooms: Understand DOK: 1 Total Points: 1

Write an algebraic expression below for the verbal expression:

Two thirds of the square of the number *p*

|  |
| --- |
| Answer: |

**Question 3** Standard: A1.SSE.A.1 Blooms: Understand DOK: 2 Total Points: 1

Jaquan makes *n* dollars per hour working at the convenience mart and *x* dollars per hour working at the car wash. Write an algebraic expression below that describes his earnings if he worked 13 hours at the car wash and 27 hours at the convenience mart:

|  |
| --- |
| Answer: |

**Question 4** Standard: A1.SSE.A.1 Blooms: Understand DOK: 2 Total Points: 1

Explain the main difference between an “algebraic expression” and a “verbal expression” in the space provided below:

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| --- |
| Answer: |

**Question 5** Standard: A1.SSE.A.2 Blooms: Understand DOK: 3 Total Points: 3

Cassandra and Giacomo are writing algebraic expressions for the phrase “*three times a sum of n squared and 3*”. Is either of them correct? Casandra says: 3(n2 + 3) Giacomo says: 3n2 + 3

Explain your answer below:

|  |
| --- |
| Circle the correct answer (1 point): Cassandra Giacomo Neither  Justify fully (2 points): |

**Question 6** Standard: A1.SSE.A.2 Blooms: Understand DOK: 1 Total Points: 2

Evaluate the expression: 8 ÷ 4 + 5(10 – 3)

|  |
| --- |
| Show ALL work here (2 points):  **Answer** (1 point): |

**Question 7** Standard: A1.SSE.A.2 Blooms: Apply DOK: 2 Total Points: 3

Write an expression below using only the *Whole Numbers* 1 through 5 with ALL 5 digits involving ONLY addition and/or subtraction to create a numeric expression with a value of “3”:

|  |
| --- |
| Show ALL work here (2 points) which PROVES your answer:  **Answer** (1 point): |

**Question 8** Standard: A1.SSE.A.2 Blooms: Apply DOK: 1 Total Points: 3

Simplify the following expression in the space provided below: 2(6x + 5) – 7x

|  |
| --- |
| Show ALL your work (2 points):  **Answer** (1 point): |

**Question 9** Standard: A1.CED.A.1 Blooms: Apply DOK: 2 Total Points: 3

Solve the following equation in the space provided below: 6h + [(3)(10) – 8] = (2)(3)h + 22

|  |
| --- |
| Show ALL your work (2 points):  **Answer** (1 point): |

**Question 10** Standard: A1.CED.A.1 Blooms: Apply DOK: 2 Total Points: 4

An electric generator can power 3550 Watts of electricity. Write and solve an equation which determines how many 75 Watt light bulbs the generator could power.

|  |
| --- |
| Write Equation here (1 point):  Show ALL your work (2 points):  **Answer** (1 point): |

**Question 11** Standard: A1.CED.A.2 Blooms: Apply DOK: 2 Total Points: 6

Solve the following equation, 2(6x + 4) = 4y, in the space provided below and then graph the equation and label the y-intercept as instructed:

|  |
| --- |
| Show ALL your work (2 points):  **Answer** (1 point): |
| Graph the equation (2 points): |
| Image result for axis grids"      **Answer** (1 point):  y intercept coordinate point: ( , ) |

**Question 12** Standard: A1.CED.A.4 Blooms: Apply DOK: 2 Total Points: 3

Solve the following equation for “x” in the space provided below: *y = m(x + h) - b*

|  |
| --- |
| Show ALL your work (2 points):  **Answer** (1 point): |

**Question 13** Standard: A1.REI.A.1 Blooms: Analyze DOK: 3 Total Points: 4

A company that replicates DVDs spends $1,800 per day in building overhead, plus $0.80 per DVD in supplies and labor. If DVDs sell for $1.69 per disk, what is the minimum number of DVDs the company must sell each day to make a profit?

|  |
| --- |
| Write Equation here (1 point):  Show ALL your work (2 points):  **Answer** (1 point): |

**Question 14** Standard: A1.REI.A.1 Blooms: Analyze DOK: 3 Total Points: 4

Find the value of “x” so that the rectangles shown below have the same area value:

|  |
| --- |
| Write Equation here (1 point):  Show ALL your work (2 points):  **Answer** (1 point): |

*x* 16

*x* - 2

12

**Question 15** Standard: A1.NQ.B.3 Blooms: Understand DOK: 3 Total Points: 4

Jules just arrived from Europe and has a new job stacking boxes in a warehouse. Each box has dimensions of 1 ft. by 1 ft. by 1.5 feet, which means they take up 1.5 cubic feet. Jules remembers his European storage room measured 6 meters by 4 meters and the ceiling was 4 meters high. He notices they are proportionally similar. He begins to wonder *how many of these 1.5 cubic feet boxes he could have fit into his European storage area* of 96 cubic meters. Round your answer to the nearest whole box. (Hint: 1 meter = 3.26 feet)ow much are the pens? How What is the price for a single notebook

|  |
| --- |
| Show ALL your work (3 points):  **Answer** (1 point): |

**Question 16** Standard: A1.NQ.A.1 Blooms: Apply DOK: 2 Total Points: 3

Magdalene is making beaded necklaces. She finds she can make a profit if she sets the price point of each necklace at $28.62 before tax. If the tax rate is 7.25% of the total sale… what is the final cost of each necklace?

|  |
| --- |
| Write Equation here (1 point):  Show ALL your work (1 points):  **Answer** (1 point): |

**Question 17** Standard: A1.REI.A.2 Blooms: Apply DOK: 2 Total Points: 3

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| --- |
| Show ALL your work (2 points):    **Answer** (1 point): |

Solve the following equation for “x”: x2 + 3x + 2 = 0

Select the correct answer below (1 point)

a) x = {1, 2} c) x = {-1, 2}

b) x = {-2, 1} d) x = {-1, -2}

**Question 18** Standard: A1.REI.A.2 Blooms: Apply DOK: 2 Total Points: 3

|  |
| --- |
| Show ALL your work (2 points):      **Answer** (1 point): |

Expand the following expression for “x”: (x-2)(x+2)

Select the correct answer below (1 point)

a) x2 - 4 c) x2 + 4

b) x2 + 4x - 4 d) x2 - 4x + 4