Algebra 2 Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Score /16

#1 HW Algebra Skills

Write an algebraic **expression** to represent each situation.

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| 1. the measure of the supplement of an angle whose measure is x | 2. the number of $0.60 bagels that can be purchased with *d* dollars |

Evaluate each for the given values of the variables.

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| 3.  for  and | 4.  for  and |

Simplify each **expression**.

|  |  |
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| 5. | 6. |

Simplify each express. Then evaluate the expression for the given values of the variables.

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| 7.  for | 8.  for |

Write and simplify an expression for the perimeter of each figure.

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| 9.  a  2a  a  2b  2a + b  a+ b | 10.  x  x  9 - x    x + 2  3x - 6    x + 3 |

Solve each problem. Show ALL WORK!!

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| 11. The Dane family is going on a 15-day vacation to travel with relatives. They budget $100 per day when visiting relatives and $275 per day when traveling.  A) Write an expression for the total budgeted cost of the vacation if they visit relatives for *d* days. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  B) What is the budgeted cost if they stay with relatives for 5 days? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  C) How does this cost change for each additional day they stay with relatives? \_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 12. While Neil Armstrong and Buzz Aldrin walked on the Moon, the *Apollo 11* command module completed 1 orbit every 119 minutes.  A) Write an expression for the time in minutes needed to complete *n* orbits. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  B) The *Apollo 11* module made 30 orbits. For how many **hours** did it orbit the moon? \_\_\_\_\_\_\_\_\_\_\_\_\_\_  C) Estimate the number of orbits the *Apollo 11* module would make in 1 week if it continued at the same rate? \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 13) Find the slope of l and *m*.    m  Slope of l  \_\_\_\_\_\_\_\_    Slope of *m*  \_\_\_\_\_\_\_\_\_ | 14) Find the slope of the line containing the following points: |
| 15) Graph, give the slope and intercepts      Slope : \_\_\_\_\_\_  x – intercept \_\_\_\_\_\_  y – intercept \_\_\_\_\_\_ | 16) Find the slope of the line containing the points  and .  (Don’t panic… it’s just like simplifying expressions!) |