**Algebra IA** Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Chapter 1.1 – 1.3 Review Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hour \_\_\_\_\_\_

Expressions, Equations, and Functions

**Evaluate each expression.**

1. 5*m* + 7 when *m* = 4 2. 4 + *z*2 when *z* = –3 3.  when *s* = –4

4. $\frac{8}{3}$ *w* when *w* = 15 5. $\frac{2}{9}z$ when *z* = 27 6. *y*2 + 18 when *y* = 5

7. A DVD storage sleeve has the shape of a square with an edge length of 5 inches. What is the area of the front of the sleeve?

8. You store square notepaper in a cube-shaped box with an inside edge length of 3 inches. What is the volume of the box?

9. 16 ÷ 8 ‧ 5 10. 72 – 24 ÷ 3 11. 8(6 – 2) + 4

12. 28 – 3(4 + 5) 13. $4+4^{2}÷2$ 14. (11 + 15) ÷ 13

15. 2[12 – (2 ‧ 3)] 16. 6[15 – (4 – 2)2] 17. $5\left[\left(4+8\right)÷3\right]$

**Evaluate each expression when *x* = 5.**

18. 15*x* – 8 19. 4*x*3 + 2 20. 2(*x* – 2)2

**Translate the verbal phrase into an expression.**

21. The difference of 9 and a number *n* 22. The quotient of 8 and twice a number *z*

23. The sum of 2 and the square of a number *r*. 24. 7 less than the number *z*

25. 4 times the quantity of 5 plus a number *p*. 26. ⅓ of a number *m*

27. The rental cost for a campsite is $25 plus $2 per person. Write an expression for the total cost. Then find the total cost for 5 people.

28. You purchase some notebooks for $2.95 each and a package of pens for $2.19. Write an expression for the total amount (in dollars) that you spend.

29. Your lunch account starts with $250 at the beginning of the year. Each time you buy a lunch, $5 is deducted from the account. Write an expression that represents the value remaining in your account after x lunches.

**Write an equation or inequality.**

30. The difference of a number *c* and 17 is more than 33.

31. The product of 3 and a number *x* is at most 21.

32. The sum of 14 and twice a number *y* is equal to 78.

33. The difference of 22 and the quotient of a number *m* and 4 is 54.

34. The sum of 7 and three times a number *b* is at least 12.

**Use these formulas to solve problems #35 – 38.**

 I = Prt D = rt P = I – E

35. What is the simple interest earned on $1200 invested over 5 years in an account that earns simple interest at a rate of 5% per year?

36. A car travels 325 miles in 4.25 hours. What is the average speed of the car?

37. Kroger buys a bag of M&M’s for $0.25 and then sells each bag for $0.99. What is their profit?

38. The temperature is 54°F. What is the temperature in degrees Celsius?