**Algebra IA** Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 1.1 Worksheet Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hour \_\_\_\_\_\_

Evaluate Expressions

**Evaluate each expression.**

1. *y* + 12 when *y* = 29 2. 47 – *x* when *x* = 33 3. 2*r* + 1 when r = 3

4. 5x – 3x when x = 4 5. $\frac{15}{m}+7$ when *m* =$ -$ 3 6. $\frac{1}{2}x-7$ when x = 12

7. $ x^{3}$ when x = 2 8. $y^{2}+8y$ when y =$ - 3$ 9. $3n^{2}-5n$ when *n* = 2



10.A side table has interior storage space in the shape of a cube. What is the volume of the storage space if the interior length is 12 inches?

11. There are 52 cards in a standard deck of playing cards. You are combining decks of cards so that you can play a game with a large number of people. The expression 52*d* represents the number of cards in *d* decks. If you combine 4 decks of cards, how many cards will you have altogether?

12. An item costs *c* dollars and 6% sales tax is charged. The total cost including sales tax is given by the expression 1.06*c*. You are buying a skateboard that costs $75. What is the cost of the skateboard including sales tax?

**Evaluate each expression.**

13. 82 14. 34 15. (– 5)3 16. (5 + 4) ∙ 7

17. (9 – 2) ∙ 3 18. 4 + 6 ∙ 3 19. 12 + 2 ∙ 2 20. (3 + 5) ∙ 5 + 1

21. 9 + 4(3 + 1) 22. 30 – 5 ∙ 4 + 2 23. 14 ÷ 7 ∙ 5 – 32

24. 4[30 – (10 – 2) ∙ 3] 25. 5 + [30 – (6 – 1)2] 26. 2[12 + (5 – 2)2]

**Evaluate each expression if *x* = 6, *y* = 8, and *z* = 3.**

27. *xy* + *z* 28. 2*x* + 3*y* – *z* 29. 2(*x* + *z*) – *y*

30. 5*x* – ( *y* + 2*z*) 31. *x*2 + *y*2 – 10*z* 32. *z*3 + (*y*2 – 4*x*)

33.  34. 

35. The length of a rectangle is 3*n* + 2 and its width is *n* – 1. The perimeter of the rectangle is twice the sum of its length and its width. (*P = 2l + 2w*)

a. Write an expression that represents the perimeter of the rectangle.

b. Find the perimeter of the rectangle when *n* = 4 inches.