Section 3-2: Translating Verbal Phrases into Symbols

1. 060408a, P.I. A.A.1
Tara buys two items that cost d dollars each. She gives the cashier $20. Which expression represents the change she should receive?

[A] $20 + 2d$ [B] $2d - 20$

[C] $20 - d$ [D] $20 - 2d$

2. 080509a, P.I. A.A.1
The sum of Scott's age and Greg's age is 33 years. If Greg's age is represented by g, Scott's age is represented by

[A] $g + 33$ [B] $g - 33$

[C] $33g$ [D] $33 - g$

3. 010604a, P.I. A.A.1
Which expression represents "5 less than the product of 7 and x"?

[A] $7x - 5$ [B] $7(x - 5)$

[C] $5 - 7x$ [D] $7 + x - 5$

4. 010820a, P.I. A.A.1
If x represents a given number, the expression "5 less than twice the given number" is written as

[A] $5 - 2x$ [B] $5 < 2x$

[C] $2x - 5$ [D] $5 < 2 + x$

5. fall0729ia, P.I. A.A.2
Which verbal expression represents $2(n-6)$?

[A] two times the quantity six less than n

[B] two times n minus six

[C] two times the quantity n less than six

[D] two times six minus n

6. 060113b, P.I. A.A.1
A store advertises that during its Labor Day sale $15 will be deducted from every purchase over $100. In addition, after the deduction is taken, the store offers an early-bird discount of 20% to any person who makes a purchase before 10 a.m. If Hakeem makes a purchase of x dollars, $x>100$, at 8 a.m., what, in terms of x, is the cost of Hakeem's purchase?

[A] $0.20x - 3$ [B] $0.80x - 12$

[C] $0.85x - 20$ [D] $0.20x - 15$

Section 3-5: Evaluating Algebraic Expressions

7. 060432a, P.I. A.N.6
Brett was given the problem: "Evaluate $2x^2 + 5$ when $x = 3$." Brett wrote that the answer was 41. Was Brett correct? Explain your answer.

8. 080408a, P.I. A.N.6
If $x = -4$ and $y = 3$, what is the value of $x - 3y^2$?
[A] -23 [B] -31 [C] -13 [D] -85

9. 010015a, P.I. A.N.6
If $t = -3$, then $3t^2 + 5t + 6$ equals
[A] 6 [B] 18 [C] -36 [D] -6

10. 060726a, P.I. A.N.6
If $a = 3$ and $b = -1$, what is the value of $ab - b^2$?
[A] 2 [B] -4 [C] -2 [D] 4

11. 010406a, P.I. A.N.6
What is the value of $\frac{x^2 - 4y}{2}$, if $x = 4$ and $y = -3$?
[A] 2 [B] 10 [C] -2 [D] 14

12. 080617a, P.I. A.N.6
If $x = 4$ and $y = -2$, the value of $\frac{1}{2}xy^2$ is
[A] 32 [B] 8 [C] -4 [D] -8

[1] D

[2] D

[3] A

[4] C

[5] A

[6] B

[2] No, and an appropriate explanation is given or the expression is evaluated correctly.
[1] No, and the correct order of operations is used to evaluate $2(3)^2 + 5$, but one computational error is made.
or [1] One conceptual error is made in evaluating the expression, but the question is answered appropriately.
or [1] Appropriate work is shown, but the question is not answered.
[0] No, but no explanation or an inappropriate explanation is given.
or [0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an
[7] obviously incorrect procedure.

[8] B

[9] B

[10] B

[11] D

[12] B