Empire State Mathematics March to May 2010 Supplement
Grade 5 Answer Key

Lesson 1 *Writing Algebraic Expressions* pp. 4–7

1. D [5.A.2]
2. C [5.A.2]
3. C [5.A.2]
4. B [5.A.2]
5. C [5.A.2]
6. C [5.A.2]
7. Short-response [5.A.2]
   A. $6n$
   B. $2 \times 6n$ *or* $12n$
8. Extended-response [5.A.2]
   A. $2.2s$
   B. the length of a step; *Explanations may vary but should say something like the following:* The variable s stands for the number of steps taken. Since the number of feet in a mile is divided by the number of steps, the expression represents the length of one step.

Lesson 2 *Evaluating Expressions* pp. 8–11

1. A [5.A.3]
2. C [5.A.3]
3. A [5.A.3]
4. C [5.A.3]
5. C [5.A.3]
6. D [5.A.3]
7. Short-response [5.A.3]
   $15; *Explanations may vary but should say something like the following:* I substituted 2 for h and solved using the order of operations: $6 + 4.50(2) = 6 + 9 = 15$.
8. Extended-response [5.A.3]
   A. 20
   B. 11; *Explanations may vary but should say something like the following:* When the parentheses are removed, the order of operations changes. The first operation is multiplying $n \times 4$ or $6 \times 4 = 24$. Then the product is added to 9 and the sum divided by 3.

Lesson 3 *Solving One-Step Equations* pp. 12–15

1. A [5.A.4]
2. B [5.A.5]
3. B [5.A.4]
4. A [5.A.5]
5. D [5.A.4]
6. D [5.A.5]
7. Short-response [5.A.4, 5]
   608; *Explanations may vary but should say something like the following:* I solved for n by using the inverse operation of subtraction, addition, on both sides of the equation: $n - 126 + 126 = 482 + 126$; $n = 608$.
8. Extended-response [5.A.4, 5]
   A. multiplication; division
   B. 9 in.; $135 \div 15 = 15w \div 15$; $9 = w$

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