Spring 2014 McNabb GDCTM Contest Answer Sheet

Name: _Key_   School: _____   Date: _____

Contest Taking (Circle One):
(Pre-algebra)   Algebra I   Geometry   Algebra II   Pre-calculus   Calculus

DIRECTIONS:

1. You are NOT permitted to use a calculator or any other electronic device. You have 45 minutes if you are taking the Pre-algebra or Algebra I contests. Otherwise, you have 60 minutes.

2. All answers should be in standard simplified from unless otherwise stated. All variables are assumed to stand for real numbers unless otherwise stated.

1. 127	6. 17	11. 33
2. 12/49	7. 200000	12. 270
3. 400	8. 180	13. $97 \cdot 103$
4. 7/9 and others	9. 25	14. $\dfrac{2197}{20825}$
5. 8	10. 110001	15. 24

SCORE:_____

SPRING 2014 MCNABB GDCTM CONTEST ANSWER SHEET

Name: __Key__   School: _____   Date: _____

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Pre-algebra   (Algebra I)   Geometry   Algebra II   Pre-calculus   Calculus
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1. 180	**6.** 6	**11.** 981
2. 25	**7.** 3	**12.** 3/4
3. 33	**8.** $\sqrt{6}$, $-\sqrt{6}$	**13.** 7 (no other answer accepted!)
4. 270	**9.** 97·103	**14.** $a = -2$ $b = -6$ $C = 1/2$
5. 6	**10.** $\dfrac{2197}{20825}$	**15.** 24

SCORE: _____

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1.
3

6.
$a = -2$
$b = -6$
$c = 1/2$

11.
$$\frac{12 + 7\sqrt{3}}{12}$$

2.
$\sqrt{6}, -\sqrt{6}$

7.
96

12.
750

3.
$$\frac{2197}{20825}$$

8.
$$\frac{103}{2}$$

13.
84π

4.
$3/4$

9.
42

14.
$(17, 144, 145)$
any others?

5.
7
only accepted form!

10.
24

15.
6

SCORE: _____

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1. 84π

2. 103

3. 222

4. $1/2$

5. 37

6. $(x^2-3x+1)(x^2+5x-1)$

7. $\dfrac{1600}{3}$ or $533\,1/3$

8. 6

9. $3/4$

10. 24

11. 7

12. $\sqrt{109}-3$

13. 8

14. $1/8$

15. $3\sqrt{21}, -3\sqrt{21}$

SCORE:_____

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1. 103

6. $3\sqrt{21}, -3\sqrt{21}$

11. $(0, 12)$

2. $1/2$

7. 21

12. $(-\infty, \tfrac{1}{5}] \cup [5, \infty)$

3. $(x^2 - 3x + 1)(x^2 + 5x - 1)$

8. 2014

13. $82/83$

4. 24

9. 360π

14. 7

5. 8

10. $-2/3$

15. 5

SCORE:_____

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1. 21	**6.** 5	**11.** $-27/64$
2. 2014	**7.** 16	**12.** $3\sqrt{3}/32$
3. 360π	**8.** $1/2$	**13.** $(35, 35)$
4. $-2/3$	**9.** 21	**14.** 13
5. $(-\infty, \frac{1}{5}] \cup [5, \infty)$	**10.** 4	**15.** $\ln(1+\sqrt{2})$

SCORE:_____