

SPRING 2017 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 60 minutes for Geometry and above. You have 45 minutes for Pre-Algebra or Algebra I.
2. All answers should be in standard simplified form unless otherwise stated. All variables are assumed to stand for real numbers unless otherwise stated.

1. 22.40

6. $\frac{20}{33}$

11. 0

2. 7^{14}

7. 24

12. 80

3. $40,000$

8. 76912

13. 99

4. 7

9. 0

14. -510

5. 7

10. 225

15. 784

SCORE: _____

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1. 22.40

6. F

11. 16

2. $20/33$

7. 69

12. -34

3. 324

8. 249

13. 51

4. 30

9. $(2, 8, 88)$
others possible
check if close.

14. 29

5. 80π

10. 32

15. 7

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1. 36π

6. 60

11. 330

2. 6

7. $96\sqrt{3}$

12. $2/3$

3. 69

8. $11 + 5\sqrt{3}$

13. $5/3$

4. $16/25$

9. 19

14. 288

5. 80π

10. $2b^2/a$

15. $7/5$

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1. 7^{14}

6. $\pi(3-2\sqrt{2})$

11. 3

2. one of: $(5, 2)$
 $(2, 5), (-5, -2);$
 $(-2, -5), (7, -2)$ etc
 $(-5, 7)$ etc...

7. 30

12. $33/116$

one of → 3. check if close
 $400 + 121 + 100$
 or any permutation
 or $361 + 256 + 4$ or
 $400 + 196 + 25$ or $361 + 196 + 64$ etc...

8. $1/13$

13. 38

4. $2b^2/a$

9. 80

14. $5\sqrt{13}/4$

5. 118

10. -630

15. 29

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1.
 F

6.
$$\frac{\sqrt{2} + \sqrt{6}}{4}$$

11.
 120

2.
 -2, -6
 need both

7. one of!

$$-\frac{1 \pm \sqrt{3}i}{2}, \frac{-3 \pm \sqrt{3}i}{2}$$

12.
 9

3.
 0

8.
$$33/116$$

13.
 1/3

4.
 99

9.
 2, 3
 need both

14.
$$\pi(3-2\sqrt{2})$$

5.
 (13, 8)
 others possible,
 (larger)
 check if close

10.
 2100

15. one of:
 36 or 64

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1. $\frac{1}{13}$

6. need both:
 $\frac{3 \pm \sqrt{3}}{3}$

11. $\frac{\pi^2}{2}$

2. 120

7. -510

12. $\frac{1}{5}$

3. $\frac{5}{3}$

8. $\frac{7}{27}$

13. -1023

4. $\frac{22}{3}$

9. $\frac{2}{3}$

14. $-\frac{\sqrt{3}}{8}$

5. $\frac{3}{5}$

10. $\frac{\pi}{6\sqrt{2}}$

15. one of
36 or 64

SCORE: _____