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# MATHCOUNTS

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2009

■ National Competition ■

Answer Key

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The appropriate units (or their abbreviations) are provided in the answer blanks.

**Note to coordinators:** Answers to the Tiebreaker Round problems appear in the Tiebreaker Round Booklet.

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## Sprint Round

1. 50 cents

2. 15 students

3. 375 minutes

4. 60 outcomes

5. 26

6. 19 sq units

7. 13

8. 21

9. 11

10. 36 mph

11.  $\frac{5}{648}$

12. 36 elements

13. 48 even  
divisors

14. 10 steps

15.  $\frac{13}{144}$

16.  $\frac{30}{41}$

17. 40

## Sprint Round

18. 26

19. 43 integers

20. 7.5 units

21.  $\frac{27}{256}$

22. 280 sets

23. 49

24. 28 integers

25.  $\sqrt{21}$

26. 428,571

27.  $\frac{3}{8}$  sq units

28. 6

29. -2240

30. 98 sq units

## Target Round

1. \$42 or \$42.00

3. 56 house  
numbers

5. 60 intersections

7. 33 %

2.  $432\sqrt{2}$  cu units

4. 1112112 base 3

6. 60

8. 32 cu units

## Team Round

1. 7945 kilowatts

2. 218 times

3. 33

4. 10 or 10:00 pm

5. 8 inversion  
numbers

6. 1.499

7. 24.5 inches

8.  $288\pi$  cu inches

9. 513

10.  $\frac{3}{8}$

### Countdown Round

1.  $\frac{3}{2}$  \_\_\_\_\_

2. 25 (integers) \_\_\_\_\_

3.  $\frac{16}{25}$  \_\_\_\_\_

4. 5 \_\_\_\_\_

5. BAC \_\_\_\_\_

6. 16 \_\_\_\_\_

7. 2160 (degrees) \_\_\_\_\_

8. 375 (bahs) \_\_\_\_\_

9. 4 \_\_\_\_\_

10. 224 (subsets) \_\_\_\_\_

11. 5 \_\_\_\_\_

12. 4 (values) \_\_\_\_\_

13. 47 \_\_\_\_\_

14.  $\frac{502}{2009}$  \_\_\_\_\_

15. 475 \_\_\_\_\_

16. 10 \_\_\_\_\_

17. 88 \_\_\_\_\_

18. (3, -1) \_\_\_\_\_

19. 84 (degrees) \_\_\_\_\_

20.  $\frac{1}{7}$  \_\_\_\_\_

21. 3 \_\_\_\_\_

22. 334 (sq units) \_\_\_\_\_

23. 11 \_\_\_\_\_

24. 2 \_\_\_\_\_

25. -9 \_\_\_\_\_