

# MATHCOUNTS®

## 2024 CHAPTER COMPETITION Answer Key

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.

### TITLE SPONSORS



### LEAD SPONSORS



### NATIONAL SPONSORS

National Society of Professional Engineers ▪ 3M ▪ Texas Instruments, Inc. ▪ Art of Problem Solving

FOUNDING SPONSORS: National Society of Professional Engineers, National Council of Teachers of Mathematics and CNA Insurance

Copyright MATHCOUNTS, Inc. 2024. All rights reserved.

## Sprint Round

1. 529.14

2. ( 2 , 3 )

3. 18

4. 21

5. 12 cm

6. 4

7. 18 cm

8. 15 combinations

9. 50

10. 210 words

11. 600 students

12. 9 zips

13. 110 degrees

14.  $5\frac{1}{4}$  hours

15. 20 inches

## Sprint Round

16. 35

17. 97

18. 40 cm<sup>2</sup>

19. 15

20.  $\frac{37}{63}$

21. 30

22. 121

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

24. 40

25. 8

26. 9

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

28. 123,475,869

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

30. 54 cm<sup>2</sup>

## Target Round

1. 17 picnic  
tables

3. 300 minutes

5. 21 blocks

7. 15 mL

2. 36 in<sup>2</sup>

4. 182 cm

6. \$ 10,004

8. 15 lilypads

## Team Round

1. 5 darts

2. 26.6 years

3. 37.3 cm<sup>2</sup>

4. 270 computers

5. 15 Golden Retrievers

6. 12,139

7. 29 ordered triples

8. 49 cm<sup>2</sup>

9.  $2\frac{1}{7}$  chain segments

10. 6600 cents

## Countdown Round

1.  $\frac{-105}{4}$

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

3.  $65$  (mules per hour)

4. (Rung)  $17$

5.  $120$

6.  $11$

7.  $25$  (percent)

8.  $40$  (seconds)

9.  $8$

10.  $128$

11.  $120$  (degrees)

12.  $66$

13.  $1\frac{1}{4}$  (cups)

14.  $46$  (degrees)

15.  $21$  (eggs)

16.  $10$  (years)

17.  $1992$  (cents)

18.  $12$  (units)

19.  $2703$

20.  $120$  (dinner specials)

21.  $5$

22.  $25$  (minutes)

23.  $2023$

24.  $2$

25.  $1$

26.  $24$  (servings)

27.  $1024$

28.  $71$  (degrees)

29.  $140$

30.  $50,500$  (dollars)

31.  $1440$  (dollars)

32.  $\sqrt{85}$  (units)

33.  $72$  (hours)

34.  $20$  (diagonals)

35.  $4$

36.  $59$  (dollars)

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

38.  $18$  (minutes)

39.  $6$  (factors)

40.  $\frac{29}{45}$

### Countdown Round

41.  $\underline{5}$

42.  $\underline{359 \text{ (days)}}$

43.  $\underline{35\pi \text{ (cm}^2\text{)}}$

44.  $\underline{\frac{-\sqrt{10}}{2}}$

45.  $\underline{\frac{2}{9}}$

46.  $\underline{32\pi \text{ (miles)}}$

47.  $\underline{40}$

48.  $\underline{5 \text{ (miles)}}$

49.  $\underline{385}$

50.  $\underline{400}$

51.  $\underline{\frac{5}{12}}$

52.  $\underline{13 \text{ (cm)}}$

53.  $\underline{120}$

54.  $\underline{7}$

55.  $\underline{\frac{3}{1}}$

56.  $\underline{\frac{1}{3}}$

57.  $\underline{2023}$

58.  $\underline{4 \text{ (prime numbers)}}$

59.  $\underline{37,890}$

60.  $\underline{256}$

61.  $\underline{349 \text{ (dollars)}}$

62.  $\underline{3 \text{ (necklaces)}}$

63.  $\underline{10 \frac{1}{2} \text{ (cups)}}$

64.  $\underline{50 \text{ (feet)}}$

65.  $\underline{2}$

66.  $\underline{30 \text{ (percent)}}$

67.  $\underline{7}$

68.  $\underline{23}$

69.  $\underline{90 \text{ (factors)}}$

70.  $\underline{21 \text{ (glasses)}}$

71.  $\underline{\frac{1}{1}}$

72.  $\underline{\frac{30,000}{1}}$

73.  $\underline{\frac{1}{9}}$

74.  $\underline{\frac{46 \text{ (fish)}}{133}}$

75.  $\underline{\frac{3}{10}}$

76.  $\underline{9}$

77.  $\underline{4 \text{ (times)}}$

78.  $\underline{\frac{1100 \text{ (stalks)}}{2}}$

79.  $\underline{\frac{2}{9}}$

80.  $\underline{181 \text{ (rocks)}}$

