MATHCOUNTS

1990-91 School Competition Answer Key

Optional units are indicated in parentheses. Standard abbreviations have been used for units of measure. Complete words or symbols are also acceptable. Square units/cube units may also be expressed as units² or units³.

Sprint Round

| | and the second |
|-----------------------|--|
| 11. (\$) 75 (dollars) | 21. (\$) 1,210 (dollars) |
| 12. 52 (%) | 22 . $\frac{5}{11}$ |
| 13. 17 | 23. 660 |
| 14. 1225 | 24. 2 $\frac{2}{3}$ |
| 15. 70 | 25 . $\frac{5}{9}$ |
| 16. (\$) 1 (dollar) | 26. 202 |
| 17. 32 | 27. 81 |
| 18. 25 (%) | 28. $\frac{3}{8}$ |
| 19. 0.333 | 29. $16\frac{1}{2}$ |
| 20. 14 | 30. 6.76 x 10 ⁶ (license plate numbers) |
| | 12. 52 (%) 13. 17 14. 1225 15. 70 16. (\$) 1 (dollar) 17. 32 18. 25 (%) 19. 0.333 |

Target Round

30
 17 (points of intersection)
 5

4. 64 (%)

- 5. 1.6 (vehicles)
- 6. 36 (faculty members)
- 7. 1:03 (PM)
- 8. 0

Team Round

 1. 7 (rides)
 6. 16 (blue balls)

 2. (\$)19.60 (dollars)
 7. 48 (units)

 3. (\$) 20 (dollars)
 8. 6 (4-digit numbers)

 4. S (the letter "S")
 9. 120 (cubes)

 5. 5 (sides)
 10. 4 (sq ft)

| 1. | (47, 108) | 19 |
|-----|---------------------------------|-----|
| 2. | 42 | 20 |
| 3. | (\$) 0.20 (dollars per mile) | 2 |
| 4. | <u>12</u> 13 | 2: |
| 5. | 67 (oz) | 23 |
| | 0.72 (kilograms) | 24 |
| | (\$) 9.60 (dollars) | 2 |
| 8. | 1,980 (light bulbs) | 20 |
| 9. | 121 (sq cm) | 27 |
| 10 | . 19 (yds) | 21 |
| 11. | . 20 (hours) | 29 |
| 12 | . (\$) 15 (dollars) | 30 |
| 13. | . 4 (years) | 3. |
| 14. | . 5 (ft) | 32 |
| 15. | . 8 | 3: |
| 16. | . 24 (ways) | 34 |
| 17. | . 59 | 3! |
| 18. | $.4\frac{1}{2}$ | 134 |

| 19. | 101 (even numbers) |
|-----|-------------------------------|
| 20. | 6 (line segments) |
| 21. | 5 (whole numbers) |
| 22. | <u>2</u> 9 |
| 23. | 5,280 (ft per minute) |
| 24. | 3√2 (cm) |
| 25. | 310 (sq cm) |
| 26. | 30 and -9 (either order) |
| 27. | 3 (prime numbers) |
| 28. | 5 |
| 29. | 100 |
| 30. | 66 |
| 31. | 4 |
| 32. | 4 (prime numbers) |
| 33. | 28 (sq units) |
| 34. | 184 (sq ft) |
| 35. | 14, 16, and 18 (in any order) |
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