



Middle School Calculator - Sample

Problems 1-50

Name: _____

School (Team): _____

Grade: _____

Correct: _____

Incorrect: _____

Significant Digit (SD) Errors: _____

SCORE: $(5 \times \text{Correct} - 2 \times \text{Inc} - 2 \times \text{SD} =)$ _____

Scorer's Initials: _____ Scorer's Initials: _____

DO NOT BEGIN UNTIL YOU ARE INSTRUCTED TO DO SO

This is a 20-minute test. There are 50 problems. Using your calculator, solve accurately and quickly as many as you can in the order in which they appear. You may use scratch paper. Write each answer in the space provided.

Answer Formats: Calculation problems and Geometric drawings require three (3) significant digits (for example: 0.123, 1.23, 12.3). Answers may be written in scientific notation (for example, 1.23×10^2). Money problems require an answer in dollars and cents (for example, \$1.23). Problems marked "integer" at the end of the answer blank should be written as an integer, again to three significant digits (for example: 123, 1230, 12,300).

A digit error of ± 1 in the third significant digit is permitted (i.e. if the answer is 1.23, then 1.22 and 1.24 would be accepted). For money problems, an error of ± 1 cent is permitted.

Providing a correct answer with too many significant digits (for example: 1.234) is considered a Significant Digit Error. The problem will be counted as Correct, but points will be deducted for the Significant Digit Error.

Scoring: Five points will be awarded for every correct answer. For every incorrect answer or skipped problem (up to the last problem attempted), two points will be deducted. For every Significant Digit Error on a correct answer, two points will be deducted. No deduction is taken after the last problem attempted.

1. $455 + 521$ ----- 1= _____
2. $17 - 192 - 61$ ----- 2= _____
3. $184 + 5240 - 1000$ ----- 3= _____
4. $11 - 9290 + 6020 - 42$ ----- 4= _____
5. $9450 + 9010 - 240 - 730$ ----- 5= _____
6. $44.2 + 33.2 - 56.4 - 21.1 - 9.9$ ----- 6= _____
7. $84.4 - 31.9 + 4.16 - 2.41 - 4.25$ ----- 7= _____
8. $1.52 + 1.63 - 1.42 + 1.04 - 8.77$ ----- 8= _____
9. $522 \times 991 \times 4060$ ----- 9= _____
10. $33 \times 24.6 \times 0.288 \times 0.500$ ----- 10= _____
11. Leigh Anne buys a dozen oranges for 39¢ each, a gallon of milk for \$2.49, and a package of cookies for \$3.09. How much change does she receive from a \$20 bill? 11=\$ _____
12. According to the Guinness Book of World Records, Scott Killion shook the hands of 25,289 different people in just 8 hours. With how many people per minute did Scott shake hands? 12= _____ Integer
13. What is 36 decreased by 975, multiplied by the reciprocal of pi? 13= _____

14. $\frac{14.1 - 22.6}{22.2 + 49.7}$ ----- 14= _____

15. $-(23.2 - 54.1 + 1.48)(-16.1)$ ----- 15= _____

16. $\frac{(23.1 / 0.122)}{(77.7 / 62.1)}$ ----- 16= _____

17. $\frac{(26 \times 322)(-0.00541)}{(52 \times 153) / 0.618}$ ----- 17= _____

18. $\{231 + 75 - 19.1\} \left[\frac{61 / 33}{88 / 21} \right]$ ----- 18= _____

19. $(1.22 / 21) [621 - 875]$ ----- 19= _____

20. $\left[\frac{-(581 - 644)(-211 + 202)}{(3.45 / 6.32) / 0.521} \right]$ ----- 20= _____

21. $\frac{\pi(13.3)}{(0.0210 / 0.554)} (4010 - 59)$ ----- 21= _____

22. $\frac{\pi(655 + 1080)}{(42 / 33)}$ ----- 22= _____

23. $\frac{(544 - 878)}{114} - \frac{656}{(231 - 878)}$ ----- 23= _____

24. Stacie's grades in her Science class are as follows: 97, 91, 98, 85, and 96. What does she need to score on her next test in order to have 93 average? 24= _____ Integer

25. Jason answered all 25 questions on an English test. He received 4 points for each correct answer and minus 2 for each incorrect answer. What was his score if he answered 3 questions incorrectly? 25= _____ Integer

26. The U.S. currency plants package money in units of 100 notes. Units are banded into "bricks", each containing 40 units. How much money would there be in a brick of \$5.00 bills? 26=\$ _____

27. $\frac{(1.33 - 0.551) / (0.439 + 0.927)}{4.16 \times 10^{10}}$ ----- 27= _____

28. $(0.510 + 0.287) [(16300 / 2650) / (550 - 800)]$ ----- 28= _____

29. $\pi [(0.355 / 0.883) (510000 - 60200)]$ ----- 29= _____

30. $(6.07) (\pi - 6.21) (1.22 \times 10^6)$ ----- 30= _____

31. $\frac{(4.34 \times 10^9) + (3.01 \times 10^9)}{1.05 \times 10^9}$ ----- 31= _____

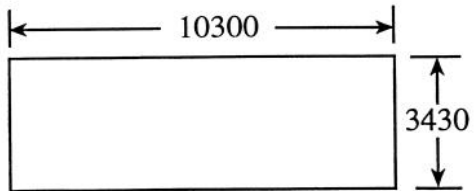
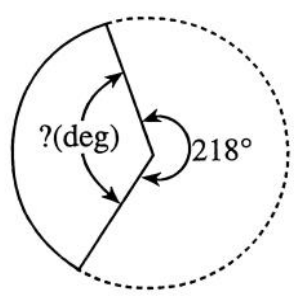
32. $(4.04 \times 10^{-8}) [(2.74 \times 10^5) + (3.72 \times 10^4)]$ ----- 32= _____

33. $\frac{1}{88.5} + \frac{1}{(37.1 - 10.2)}$ ----- 33= _____

34. $\left[\frac{1}{5.12 \times 10^{-5}} + \frac{1}{3.07 \times 10^{-5}} \right] 3[322]$ ----- 34= _____

35. A box of plastic wrap weighs 8 ounces including the box, which is 19% of the total weight. How much does plastic wrap weigh without the box? 35= _____ oz

36. The highest temperature recorded in American waters was 759°F at a hot spring measured by a submarine off the west coast of the United States. What is this temperature in degrees Celsius? 36= _____ °C

<p>37. RECTANGLE</p> <div style="text-align: center;">  <p style="margin-left: 100px;">Area = ?</p> </div> <p>37= _____</p>	<p>38. CIRCLE SECTOR</p> <div style="text-align: center;">  </div> <p style="text-align: right;">38= _____ °(deg)</p>
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39. $(16.1 - 2.13 + 3.01)^2 (0.558 - 0.834)^2$ ----- 39= _____

40. $\sqrt{\frac{4120 (1 / 0.122)}{231 + 5920}}$ ----- 40= _____

41. $65.3 \sqrt{42.3 - 61.2 + 37.8}$ ----- 41= _____

42. $\left[\frac{4040}{0.756} \right] (91.2 + 64.4)^2$ ----- 42= _____

43. $(\pi) \sqrt{\frac{65.2 + 67.5}{2.33 + 3(31.2)}}$ ----- 43= _____

44. $\left[\frac{\sqrt{147 - 2.00}}{(6.32)} - \frac{10800}{261} \right]^3$ ----- 44= _____

45. $\left[-(3.45 \times 10^{-8}) (1.44 \times 10^{-2}) + 8.08 \right]^2$ ----- 45= _____

46. $\left[\frac{\pi(64 / 14) (2.36 \times 10^4)}{(4.21 \times 10^9) \pi(30100 + 32200)} \right]^2$ ----- 46= _____

47. What is the area of a scalene triangle with a height of 23 meters and a base of 56 meters? 47= _____ m²

48. What is the product of the even integers between 30 and 40? 48= _____ Integer

49. RIGHT TRIANGLE

Hypotenuse = ?

49= _____

50. RIGHT TRIANGLE

50= _____

Answer Key

Page 1	Page 2	Page 3	Page 4
1 = 976 9.76×10^2	14 = -0.118 1.18×10^{-1}	27 = 1.37×10^{-11}	39 = 22.0 2.20×10^1
2 = -236 -2.36×10^2	15 = -474 -4.74×10^2	28 = -0.0196 -1.96×10^{-2}	40 = 2.34 2.34×10^0
3 = 4420 4.42×10^3	16 = 151 1.51×10^2	29 = 568000 5.68×10^5	41 = 284 2.84×10^2
4 = -3300 -3.30×10^3	17 = -0.00352 -3.52×10^{-3}	30 = -22700000 -2.27×10^7	42 = 129000000 1.29×10^8
5 = 17500 1.75×10^4	18 = 127 1.27×10^2	31 = 7.00 7.00×10^0	43 = 3.69 3.69×10^0
6 = -10.0 -1.00×10^1	19 = -14.8 -1.48×10^1	32 = 0.0126 1.26×10^{-2}	44 = -61500 -6.15×10^4
7 = 50.0 5.00×10^1	20 = -541 -5.41×10^2	33 = 0.0485 4.85×10^{-2}	45 = 65.3 6.53×10^1
8 = -6.00 -6.00×10^0	21 = 4360000 4.36×10^6	34 = 50300000 5.03×10^7	46 = 1.69×10^{-19}
9 = 2100000000 2.10×10^9	22 = 4280 4.28×10^3	35 = 6.48 6.48×10^0	47 = 644 6.44×10^2
10 = 117 1.17×10^2	23 = -1.92 -1.92×10^0	36 = 404 4.04×10^2	48 = 1488384 (Integer)
11 = \$9.74	24 = 91 (Integer)	37 = 35300000 3.53×10^7	49 = 196 1.96×10^2
12 = 52 (Integer)	25 = 82 (Integer)	38 = 142 1.42×10^2	50 = 0.745 7.45×10^{-1}
13 = -299 -2.99×10^2	26 = \$20,000.00		