PLACE LABEL BELOW

Name: _____ School: _____

SS/ID Number: _____ City: _____

Grade: 4   5   6   7   8   Classification: 1A   2A   3A   4A   5A   6A
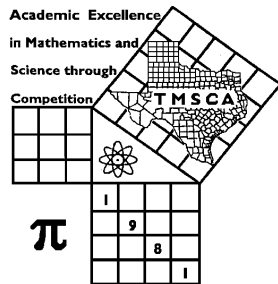
T M S C A   M I D D L E   S C H O O L

N U M B E R   S E N S E

T E S T   # 2 ©

O C T O B E R   2 6 ,   2 0 2 4

GENERAL DIRECTIONS

1. Write only the requested information on this coversheet. Do not make any additional marks on this cover sheet.
2. You will be given 10 minutes to take this test.
3. There are 80 problems on the test.
4. Write in ink only! It would be advantageous to use <u>non-black ink</u>.
5. Solve as many problems as you can in the order that they appear.
6. Problems that are skipped are considered wrong.
7. Problems that appear after the last attempted problem do not count for or against you.
8. ALL PROBLEMS ARE TO BE SOLVED MENTALLY! [No scratch work!]
9. Only the answer may be written in the answer blank.
10. Starred [*] problems require approximate INTEGRAL answers that are within 5% of the exact answers. All other problems require exact answers.
11. All problems answered correctly are worth <u>FIVE</u> points. <u>FOUR</u> points will be deducted for all problems answered incorrectly or skipped before the last problem attempted.
12. **<u>TEST SHOULD FLIP COMPLETELY OVER FOR PROBLEM #1.</u>**

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(43) The number of positive integral divisors of 80 is_____

(44) $(0.625)^2 =$ _____(fraction)

(45) The multiplicative inverse of 0.666…is____

(46) $4 + 7 + 10 + 13 + \cdots + 49 =$ _____

(47) The number of distinct ways that the letters in "COLOR" could be arranged is _____

(48) $26^2 + 26 =$ _____

(49) The number of distinct diagonals that can be drawn from all vertices of a regular decagon is _____

*(50) $\pi^e =$ _____

(51) $1 + \frac{1}{3} + \frac{1}{6} + \frac{1}{10} =$ _____

(52) In $(2x - 5)(x + 4)$, the coefficient of the linear term is _____

(53) If $4^{(x+y)} = 256$, then $(x + y)^3 =$ _____

(54) $\frac{9}{11}$ of a gallon $=$ _____ cubic inches

(55) The odds of drawing a King from a standard deck of 52 cards is _____

(56) 6 ft. $\times$ 5ft. $\times$ 9ft. $=$ _____yards³

(57) $\frac{21}{23} \times 21 =$ _____(mixed number)

(58) $3\frac{2}{3} \times 12\frac{2}{3} =$ _____(mixed number)

(59) $0.1232323 \ldots =$ _____(fraction)

*(60) $6\pi^5 =$ _____

(61) John can mow the lawn in 2 hours. Joe can mow the lawn in 3 hours. If they work together, it would take them _____ hours to mow the lawn.

(62) The harmonic mean of 5 and 4 is _____

(63) $321_4 =$ _____₅

(64) The 21ˢᵗ triangular number is _____

(65) $111 \times 745 =$ _____

(66) If $f(x) = x^2 - 3x + 1, f(f(1)) =$ _____

(67) $0.25333… =$ _____ (fraction)

(68) Two dice are rolled. The probability that the sum is a prime number is _____

(69) $3367 \times 24 =$ _____

*(70) The volume of a cone with diameter 10 cm and height of 12 cm $=$ _____cm³

(71) $\sqrt[3]{19683} =$ _____

(72) The 5ᵗʰ term of the Fibonacci sequence that begins 0,1,1 is _____

(73) $11^2 + 77^2 =$ _____

(74) {F,O,R,G,I,V,A,B,LE} has _____proper subsets

(75) $237 \times 101 =$ _____

(76) $123 \times 221 =$ _____

(77) $142857 \times 37 =$ _____

(78) How many integers less than or equal to 28 are relatively prime to 28? _____

(79) $21\% \times 366\frac{2}{3} =$ _____

*(80) The area of an equilateral triangle is 44 m². The perimeter of the triangle is _____m

(1) $2025 \times 2 =$ _____

(2) $431 - 298 =$ _____

(3) $35 \times 24 =$ _____

(4) $0.4 =$ _____(percent)

(5) $4^3 =$ _____

(6) $\frac{3}{4} + \frac{7}{12} =$ _____

(7) $8 - 2.4 =$ _____

(8) $3456 \div 3$ has a remainder of _____

(9) $1.4 \times 5 =$ _____

*(10) $2025 - 486 + 131 =$ _____

(11) $81 \times 79 =$ _____

(12) $97 \times 91 =$ _____

(13) $\frac{3}{5} + \frac{5}{3} =$ _____(mixed number)

(14) $73 \times 77 =$ _____

(15) MCMXLIX=_____(Arabic numeral)

(16) 20% of $60 = 40\%$ of _____

(17) $\frac{17}{40} =$ _____(decimal)

(18) $1234 \times 12 =$ _____

(19) Which is smaller, $\frac{1}{7}$ or .15? _____

*(20) $84235 \div 117 =$ _____

(21) The number of distinct prime factors
of 60 is _____

(22) $125 \times 64 =$ _____

(23) $0.1666\ldots =$ _____(fraction)

(24) $18^2 =$ _____

(25) The GCF of 18 and 72= _____

(26) $56_7 =$ _____₁₀

(27) If one roll costs \$1.32, how much would a baker's
dozen cost? \$_____

(28) $5\frac{1}{8} - 3\frac{1}{4} =$ _____(mixed number)

(29) $\left(\sqrt{36}\right)^3 =$ _____

*(30) $\sqrt{125} + \sqrt{216} + \sqrt{365} =$ _____

(31) $47^2 =$ _____

(32) 4 yards + 2 feet = _____inches

(33) $\sqrt[3]{1331} =$ _____

(34) $\sqrt{9025} =$ _____

(35) $108 \times 109 =$ _____

(36) $(4x - 5)^2 = ax^2 + bx + c. \ a + b =$ _____

(37) 88 ft/sec = _____mph

(38) $143 \times 56 =$ _____

(39) The area of a square with diagonal 12 is_____

*(40) $\sqrt{38472} =$ _____

(41) $66\frac{2}{3}\%$ of $72 =$ _____

(42) The distance between $(-4, 7)$ and $(1, 19)$
is _____

(1) 4050

(2) 133

(3) 840

(4) 40

(5) 64

(6) $\frac{4}{3}, 1\frac{1}{3}$

(7) 5.6

(8) 0

(9) 7

(10) $1587 - 1753$

(11) 6399

(12) 8827

(13) $2\frac{4}{15}$

(14) 5621

(15) 1949

(16) 30

(17) .425

(18) 14808

(19) $\frac{1}{7}$

(20) $684 - 755$

(21) 3

(22) 8000

(23) $\frac{1}{6}$

(24) 324

(25) 18

(26) 41

(27) 17.16

(28) $1\frac{7}{8}$

(29) 216

(30) $43 - 47$

(31) 2209

(32) 168

(33) 11

(34) 95

(35) 11772

(36) -24

(37) 60

(38) 8008

(39) 72

(40) $187 - 205$

(41) 48

(42) 13

(43) 10

(44) $\frac{25}{64}$

(45) $\frac{3}{2}, 1\frac{1}{2}$, 1.5

(46) 424

(47) 60

(48) 702

(49) 35

(50) $22 - 23$

(51) $1.6, \frac{8}{5}$, $1\frac{3}{5}$

(52) 3

(53) 64

(54) 189

(55) $\frac{1}{12}$

(56) 10

(57) $19\frac{4}{23}$

(58) $46\frac{4}{9}$

(59) $\frac{61}{495}$

(60) $1745 - 1927$

(61) $1.2, 1\frac{1}{5}$, $\frac{6}{5}$

(62) $\frac{40}{9}$, $4\frac{4}{9}$

(63) 212

(64) 231

(65) 82695

(66) 5

(67) $\frac{19}{75}$

(68) $\frac{5}{12}$

(69) 80808

(70) $299 - 329$

(71) 27

(72) 3

(73) 6050

(74) 1023

(75) 23937

(76) 27183

(77) 5285709

(78) 12

(79) 77

(80) $29 - 31$