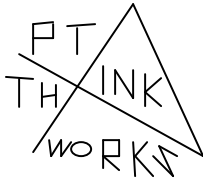


Name: _____
School: _____
Grade: 3 rd 4 th 5 th



Elementary General Math #2

2018-2019

General Directions

This test will last for 40 minutes. There are 50 problems on the test.

Write all answers on your answer sheet.

You may write on the test and show work on the test. You are not required to show any of your work or calculations.

You may skip around on the test. All problems have only one correct answer.

Calculators may NOT be used on this test.

Scoring: All problems correctly answered are worth 5 points. Two points will be subtracted for all problems answered incorrectly. No points are subtracted for problems that are skipped.

Tiebreakers: (1) Percent accuracy (2) First problem missed (not counting skips).

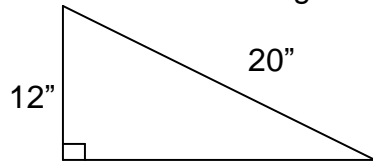
Elementary Math Test #2

General Math Test – 4th and 5th Grade

Choose the letter of the correct answer. You may skip around on this test.

1. What is the product of 25 and 12?
A. 37 B. 13 C. 300 D. 275 E. 250
2. What is the greatest common factor of 85 and 51?
A. 1 B. 4335 C. 3 D. 17 E. 4115
3. What is the slope of a segment connecting (8,6) and (13,16)?
A. 2.4 B. 2 C. $\frac{1}{2}$ D. 0.25 E. undefined
4. What is 20% of 1,760?
A. 352 B. 3520 C. 462 D. 176 E. 242
5. Which of these numbers has seven positive integral factors?
A. 201 B. 24 C. 64 D. 355 E. 42
6. The product of 92 and 98 is:
A. 8426 B. 8416 C. 9016 D. 8926 E. 9136
7. Change 333_4 to base 10.
A. 63 B. 67 C. 71 D. 27 E. 53
8. Wesley keeps a piggy bank of coins in his room. He decided to empty it and count the money. He counted 30 quarters, one half-dollar, 37 dimes, 41 nickels and 143 pennies. What was the total value of his money?
A. \$18.15 B. \$16.28 C. \$14.38 D. \$15.18 E. \$9.48

9. What is the area of this triangle?



- A. 96 in^2 B. 32 in^2 C. 72 in^2 D. 120 in^2 E. 60 in^2

10. What is the units digit of 7^{132} ?

- A. 1 B. 7 C. 9 D. 2 E. 3

11. What is the least common multiple of 35 and 42?

- A. 7 B. 110 C. 210 D. 1470 E. 245

12. Of the numbers listed, what is the smallest prime number greater than 129?

- A. 139 B. 137 C. 135 D. 133 E. 131

13. $79 \times 61 =$ _____.

- A. 4829 B. 4839 C. 4849 D. 4819 E. 4859

14. What is the area of a rhombus with diagonals of 28 and 36?

- A. 1008 B. 144 C. 504 D. 484 E. 128

15. Forty eight has how many integral factors?

- A. 25 B. 14 C. 10 D. 12 E. 8

16. What is the name of a polygon with 6 interior angles?

- A. heptagon B. pentagon C. hexagon D. dodecagon E. hendecagon

17. If $A\$B = 5A + 3B$, then what is the value of $6\$5$?

- A. 45 B. 71 C. 43 D. 19 E. 55

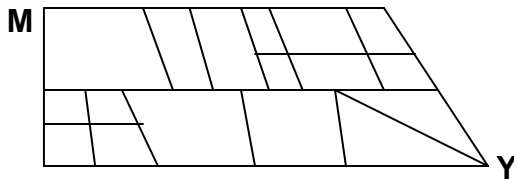
18. How many positive whole numbers less than 16 are relatively prime to 16?

Two numbers are relatively prime if their greatest common factor is one.

- A. 15 B. 12 C. 4 D. 6 E. 8

19. How many paths exist from top corner **M** to bottom corner **Y**? You may only move to the right or down or diagonally downward.

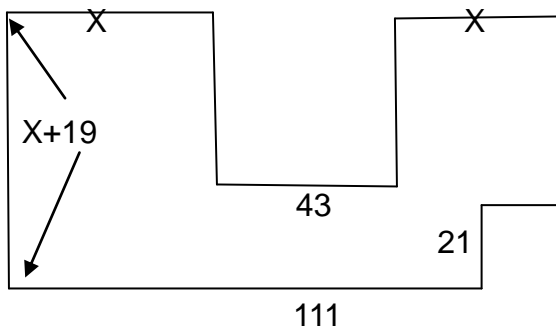
A. 28 B. 33 C. 34 D. 35 E. 31



20. If 40% of 90 is subtracted from 30% of 600, what is the result?
 A. 144 B. 6 C. 105 D. 140 E. 1340
21. How many distinct integral factors does 120 have? (Hint: The factors of 12 are 1, 2, 3, 4, 6, and 12.)
 A. 12 B. 8 C. 14 D. 16 E. 18
22. How many subsets does set V have? Set $V = \{\mathcal{E}, \phi, \pi, \heartsuit\}$.
 A. 16 B. 15 C. 1 D. 4 E. 32
23. What is the sum of the numbers in row 7 of Pascal's triangle?
 A. 7 B. 32 C. 128 D. 35 E. 64
24. Trigonometry is based on the geometry of triangles. Three trig ratios are sine, cosine, and tangent. Which fraction below refers to the sine ratio?
 A. $\frac{A}{O}$ B. $\frac{A}{H}$ C. $\frac{O}{H}$ D. $\frac{O}{A}$ E. $\frac{H}{A}$
25. Ella found the greatest common factor of 45 and 36. She multiplied this by the least common multiple of the same numbers. What was the result?
 A. 1520 B. 1620 C. 540 D. 180 E. 810
26. What is the remainder when 283,109,451 is divided by 9?
 A. 5 B. 3 C. 6 D. 8 E. 7
27. Solve for M in this equation: $2M - 12 = 432$?
 A. -210 B. 222 C. 210 D. 418 E. 442
28. If 8 jumps = 3 towns and 30 towns = 16 bats, then 15 jumps = ___ bats.
 A. 2 B. 4 C. 3 D. 12 E. 6
29. What is the largest possible integral length of the third side of a triangle with sides of 17 and 26?
 A. 43 B. 42 C. 44 D. 9 E. 10
30. What is the 10th number in this pattern: 2, 5, 8, 11, __, __?
 A. 29 B. 32 C. 35 D. 17 E. 23

31. A perfect square always has an odd number of positive integral factors. How many factors does 2304 have?
A. 23 B. 25 C. 27 D. 33 E. 21
32. The greatest common factor of 2788 and 918 is:
A. 1 B. 2 C. 17 D. 68 E. 34
33. Ayden loves math. One day, he wrote the first 21 rows of Pascal's triangle in his notebook. Knowing that the top row is called row zero, he decided to add the numbers in each row. What was the total sum of the numbers in rows 12 and 14?
A. 24576 B. 20480 C. 12288 D. 18432 E. 10240
34. How many numbers between 34 and 501 contain a 5 as a digit?
A. 94 B. 91 C. 93 D. 49 E. 50
35. Lara and Allyson each have three children. The ages of Lara's children are 6, 10 and 12. The ages of Allyson's children are 5, 10 and 13. What is the average of the ages of the six children? Round your answer to the nearest tenth.
A. 10.1 B. 9.3 C. 9.4 D. 11.2 E. 9.1
36. $8.42 \text{ hg} = \underline{\hspace{2cm}} \text{ cg}$
A. 842 B. 8420 C. 84200 D. 842000 E. 0.000842
37. Find the sum of $\frac{3}{8} + 0.23 + \frac{3}{4}$.
A. 1.355 B. 1.535 C. 1.325 D. 1.375 E. 1.345
38. What is the total sum of the degrees of all of the exterior angles in 8 pentagons?
A. 4320 B. 2880 C. 800 D. 360 E. 1440
39. How many distinct arrangements of the word FOOTBALL are possible? (Hint: The arrangement does not have to spell a correct word. FLATLOBO would count as an arrangement.)
A. 40320 B. 8 C. 20160 D. 10080 E. 80
40. What is the sum of 38 and 112?
A. 150 B. 140 C. 120 D. 130 E. 160

41. A bag contains 8 different colored marbles. How many ways could you randomly select 4 marbles from the bag?
 A. 2 B. 70 C. 1680 D. 8 E. 40
42. What is the area of an equilateral triangle with a side length of $2\sqrt{3}$?
 A. $6\sqrt{3}$ B. $2\sqrt{3}$ C. $24\sqrt{3}$ D. $8\sqrt{3}$ E. $12\sqrt{3}$
43. Find the answer: $\sqrt{64} + \sqrt{25} = \underline{\hspace{2cm}}$.
 A. 89 B. 13 C. $\sqrt{89}$ D. 9.3 E. 44.5
44. What is the prime factorization of 6750?
 A. $2 \times 3^2 \times 5^3$ B. $2 \times 3^2 \times 5$ C. $2 \times 3 \times 5^3$ D. $2 \times 3^3 \times 5^2$ E. $2 \times 3^3 \times 5^3$
45. What is the perimeter of a right triangle with side lengths of 7 and 25 and an area of 84 square inches?
 A. 39 in B. 56 in C. 32 in D. 42 in E. 55 in
46. What is the reciprocal of the reciprocal of 2.5?
 A. 5.2 B. 0.4 C. 0.04 D. 0.25 E. 2.5
47. What is the 14th term in this pattern: 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89...?
 A. 377 B. 610 C. 144 D. 367 E. 357
48. Find the perimeter of this figure. The figure is a rectangle with a 2 squares missing. The figure is not drawn to scale.



- A. 434 B. 477 C. 456 D. 413 E. 505
49. What is the value of 6 quarters, 36 dimes, and 56 nickels?
 A. \$8.15 B. \$7.85 C. \$8.05 D. \$7.90 E. \$10.70
50. What is the degree measure of the smaller angle between the minute and hour hands of an analog clock at 12:44?
 A. 117 B. 117.5 C. 118 D. 96 E. 104