

Academic Fest 2019 – Elementary Math Sample

Rules for General Math

1. **Eligibility:** Students entering grades 4th and 5th in school year 2019 – 2020.
2. About the Test:
 - a. Time : 45 minutes
 - b. Questions : 50
 - c. All the questions have multiple choice answers. All problems have ONE and ONLY ONE correct [BEST] answer. There is penalty for all incorrect answer.
 - d. All problems answered correctly are worth FIVE points. TWO points will be deducted for all problems answered incorrectly. No points will be added or subtracted for problems not answered.
 - e. Calculators MAY NOT be used on this test.
 - f. In case of ties, percent accuracy will be used as a tie breaker.
 - g. Calculators, books, scrap papers or any supporting documents will not be allowed in the test room. Contestants will be provided with the scrap papers, pencil and eraser. However, they are allowed to bring their own pencils and eraser.
3. Contestants should arrive on time to get benefit of the full duration of 45 minutes. If any contestant arrives after the beginning of the contest, he/she will get only the remaining time to finish the contest.
4. Each contestant must write his/her contestant ID only on the answer-sheet for the answer-sheet to be evaluated.
5. Each contestant must return the answer sheet to the coordinator at the end of the test duration.
6. No Parents/Guardians/visitors will be allowed in the test room during the test.
7. The judges' decisions will be final.

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1. If a special stamp costs \$ 0.17 each, then 8 of these stamps will cost?
 - A) \$0.25
 - B) \$0.56
 - C) \$1.26
 - D) \$1.36

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Ans: D

2. If Jill is 2cm taller than John, and John is 3 cm taller than Jim, then Jill is ____ than Jim?

- A) 5 cm taller
- B) 5 cm shorter
- C) 1 cm taller
- D) 1 cm shorter

Ans: A

3. In a leap year, the 70th day of the year will be March __ ?

- A) 9th
- B) 10th
- C) 11th
- D) 12th

Ans: B

4. When $(1000+900+90+2)$ is divided by 5, the remainder is?

- A) 1
- B) 2
- C) 3
- D) 4

Ans: B

5. The time 475 minutes after 1:00 p.m. is?

- A) 7:55 p.m.
- B) 8:45 p.m.
- C) 8:55 p.m.
- D) 9:55 p.m.

Ans: C

6. If a grocer had 265 apples and he wanted to sell them in groups of 7, how many extra would he have left after all groups are sold?

- A) 9 apples
- B) 23 apples
- C) 4 apples
- D) 6 apples

Ans: D

7. The length of a side of a square is __ % of its perimeter?

- A) 4
- B) 25
- C) 40
- D) 100

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Ans: B

8. The difference of two prime numbers can never equal?
- A) 1
 - B) 2
 - C) 7
 - D) 8

Ans: C

9. Consecutive numbers are natural numbers that follow in order as in the case of 3, 4, 5, 6, and 7. Find three consecutive numbers whose product is 15, 600?
(please write in the correct answer below)

Ans: 24, 25, 26

10. In Sandy's math class, the ratio of boys to girls is 6 to 5. If there are 33 kids in Sandy's math class, How many girls are there?
- A) 20
 - B) 18
 - C) 13
 - D) 15

Ans: D

11. A group of 12 girl scouts had enough food to last for 8 days when they arrived at camp. However, 4 more scouts joined them without the amount of food being increased. How long will the food last if each scout is given the same daily ration as originally planned?
(please write in the correct answer below)

Ans: 6 days

12.
$$\begin{array}{r} \text{IN} \\ + \text{RID} \\ \hline \text{DEER} \end{array}$$

In the addition problem above, each letter represents a digit and different letters represent different digits. What four-digit number does DEER represent?
(please write in the correct answer below)

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Ans: 1009 _____

13. If I add 5 to $\frac{1}{3}$ of a number, the result is $\frac{1}{2}$ of the number. What is the number?

 Ans: 30

14. Julie has a drawer which contains 40 socks in the following numbers and colors; 12 tan, 9 brown, 11 gray, and 8 blue. Suppose Julie is blindfolded. What is the fewest number of socks she must pick to be absolutely certain that she has two socks of the same color among those picked?

 Ans: 5 socks

15. Concert tickets cost \$2.00/child and \$5.00/adult. A group of thirty people consisting of children and adults paid a total of \$87.00 for the concert. How many adults were in the group?

 Ans: 9 adults

16. If there are 432 boys and 568 girls at a school, what percentage of the kids are girls? Express your answer as a percent to the nearest tenth.

- A) 64.3%
- B) 56.8%
- C) 50%
- D) 43.2%

Ans: B

17. A dog takes 3 steps to walk the same distance for which a cat takes 4 steps. Suppose 1 step of the dog covers 1 foot. How many feet would the cat cover in taking 12 steps?

 Ans: 9 feet

18. A clock is set correctly at 2:00 p.m. It loses 3 minutes every hour. What is the correct time when the clock reads 9:00 a.m. the next day?

- A) 8:00 a.m.
- B) 8:03 a.m.
- C) 9:57 a.m.
- D) 10:00 a.m.

Ans: D

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19. There are 30 students in a class, and three-fifths of them are girls. How many boys are in the class?

- A) 6
- B) 12
- C) 18
- D) 24

Ans: B

20. A man has 10 sons. Each of these sons has 10 sons. How many people does that make all together?

- A) 21
- B) 100
- C) 101
- D) 111

Ans: D

21. In what month does the 100th day of the year occur?

- A) March
- B) April
- C) May
- D) June

Ans: B

22. Find the missing number: $20/32 = ?/24$

- A) 15
- B) 16
- C) 17
- D) 18

Ans: A

23. A basketball team won 4 games and lost 20 games. What fraction of its games did the team win?

- A) $1/5$
- B) $1/4$
- C) $4/5$
- D) $1/6$

Ans: D

24. How many prime numbers are between 20 and 30?

- A) 1
- B) 2
- C) 3
- D) 4

Ans: B

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25. In Paris, a boy walks 4 km north, 5 km south, 2 km north, and 3 km south. How far is the boy from his starting point?

- A) 14 km north
- B) 12 km south
- C) 2 km north
- D) 2 km south

Ans: D

26. Which of the following is equal to one million?

- A) one hundred thousands
- B) ten thousands
- C) one hundred hundreds
- D) one thousand thousands

Ans: D

27. The larger acute angle of a right triangle could *never equal*?

- A) 40°
- B) 50°
- C) 88°
- D) 89°

Ans: A

28. Find the product of the prime factors of 70?

- A) 10
- B) 14
- C) 35
- D) 70

Ans: D

29. Which of the following numbers is *not* the square of an integer?

- A) 100
- B) 200
- C) 400
- D) 900

Ans: B

30. If I earn \$1 every 20 minutes, how much do I earn in 24 hours?

- A) \$3
- B) \$8
- C) \$24
- D) \$72

Ans: D

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31. After 5 tests, a student's average was 80. After taking an examination which counted as two test grades, his average dropped to 76. What was his grade on that examination?

- A) 52
- B) 66
- C) 72
- D) 76

Ans: B

32. When a certain number is divided by 3, the quotient is 240. When that same number is divided by 6, the quotient is ?

- A) 720
- B) 480
- C) 120
- D) 80

Ans: C

33. What is the average of 6, 9, 13, 2, 7 and 5?

- A) 5
- B) 9
- C) 7
- D) 4

Ans: C

34. Jane buys a shirt for \$18.45. If she gives a coupon for \$1.50 off, and pays with a \$20 bill, how much change will she receive?

- A) \$1.55
- B) \$3.00
- C) \$2.00
- D) \$3.05

Ans: D

35. What is the value of $(4 + (9 - 4) / 3)^2$?

Ans: 289/9

36. The sum of 7 numbers is 567. Their average is?

- A) 81
- B) 88
- C) 91
- D) 98

Ans: A