

# Franklin Math Bowl

7<sup>th</sup> Grade

Written Test

2002

1. What is the next number in the following sequence?

$$\frac{2}{3}, \frac{4}{5}, \frac{6}{7}, \frac{8}{9} ?$$

- A)  $\frac{2}{15}$       B)  $\frac{10}{11}$       C)  $\frac{13}{16}$       D) 1      E) None of these

2. A class picnic was attended by 85% of the students. Nine students did not attend. How many students were in the class?

- A) 77      B) 85      C) 60      D) 78      E) None of these

3. Which of the following numbers could be the sides of a right triangle?

- A) 5,12,13      B) 6,9,11      C) 7,6,9      D) 4,11,12      E) None of these

4. What is the number 1 in scientific notation?

- A)  $1.0 \times 10^1$       B) 1      C)  $1.0 \times 10^{-1}$       D)  $1.0 \times 10^0$       E) None of these

5. How many  $\frac{3}{8}$  inch lengths of ribbon can be cut from a 3 inch piece?

- A) 8      B) 3      C) 4      D) 6.5      E) None of these

6. A polyhedron is a solid that is bounded by polygons which are called faces. The segments where the faces meet are \_\_\_\_\_ and the points where the edges meet are \_\_\_\_\_. Two common types of polyhedrons are \_\_\_\_\_ and \_\_\_\_\_. Which order will make this paragraph true?

- A) vertices, pyramids, edges, prisms  
B) edges, vertices, prisms, pyramids  
C) prisms, vertices, edges, pyramids  
D) pyramids, edges, vertices, prisms  
E) None of the above

7. Evaluate  $\frac{8!}{4!}$
- A) 2!    B) 1,680    C) 6,720    D) 32!    E) None of these
8. On his first three math tests George scored 90, 82, 84. What must he score on his fourth test for his mean score to be 86?
- A) 88    B) 96    C) 74    D) 90    E) None of these
9. If  $x = 6$ , which of the following expressions does not equal 36 ?
- A)  $x^2$     B)  $x^{-2}$     C)  $-x(-x)$     D)  $(-x)^2$     E) None of these
10. Which is the best estimate for 2,500.3 divided by 24.9 ?
- A) 10    B) 100    C) 500    D) 1,000    E) None of these
11. Which decimal is equal to 0.025 %
- A) 0.0025    B) 0.00025    C) 2.5    D) 0.25    E) None of these
12. A local restaurant is offering a free meal to every 25<sup>th</sup> customer, and a free hat to every 12<sup>th</sup> customer. Which customer will be the first to get both a free meal and a free hat?
- A) 120<sup>th</sup>    B) 150<sup>th</sup>    C) 60<sup>th</sup>    D) 300<sup>th</sup>    E) None of these
13.  $6\frac{7}{8} \times 2\frac{2}{5} =$
- A)  $1\frac{29}{96}$     B)  $12\frac{7}{20}$     C)  $14\frac{3}{16}$     D)  $16\frac{1}{2}$     E) None of these
14. How many equilateral triangles with 1 cm sides can be cut from an equilateral triangle with 3 cm sides ?
- A) 3    B) 6    C) 9    D) 12    E) None of these

15. Write the following expression without parentheses and combine like terms if possible. Then evaluate it when  $y=4$ , and  $z=6$ .

$$z(y+2)+|-y|$$

- A) 32            B) 54            C) 40            D) 28            E) None of these
16. A shirt that regularly sells for \$27 is on sale for \$16.20. What is the percent markdown on the shirt?
- A) 40%            B) 60%            C) 52%            D) 10.9%            E) None of these
17. A letter from the alphabet is chosen at random. What is the probability that it is : A, M or F ?
- A)  $\frac{1}{78}$             B)  $\frac{1}{26}$             C)  $\frac{3}{39}$             D)  $\frac{3}{26}$             E) None of these
18. Evaluate:  $-6-12 \div 3 \times 2 - (-4)^2$
- A) -28            B) -30            C) -24            D) 2            E) None of these
19. Order from least to greatest:  
0.0031 km, 3.4 cm, 53.25 mm, 0.49 m
- A) 0.0031 km, 53.25 mm, 3.4 cm, 0.49 m  
B) 3.4 cm, 0.0031 km, 53.25 mm, 0.49 m  
C) 3.4 cm, 53.25 mm, 0.49 m, 0.0031 km  
D) 53.25 mm, 3.4 cm, 0.0031 km, 0.49 m  
E) None of the above
20. Find the simplified sum of  $8\frac{21}{22} + 12\frac{25}{33}$ .
- A)  $20\frac{113}{66}$             B)  $20\frac{46}{55}$             C)  $114\frac{173}{726}$             D)  $21\frac{47}{66}$             E) None of these.

21. What is the sum of the first 12 even counting numbers?
- A) 156      B) 78      C) 42      D) 155      E) None of these
22. Find two numbers so that, when added together, they equal 56 and, when multiplied they equal 783.
- A) 42, 14      B) 30, 26      C) 31, 25      D) 27, 29      E) None of these
23. Which statement is false?
- A) Both 8 and 12 are divisible by 2.  
B) The greatest common factor of 8 and 12 is 2.  
C) The least common multiple of 8 and 12 is 24.  
D) Both 8 and 12 are divisible by 4.  
E) None of the above.
24. What number is halfway between  $\frac{1}{8}$  and  $\frac{1}{4}$ ?
- A)  $\frac{1}{6}$       B)  $\frac{3}{16}$       C)  $\frac{1}{12}$       D)  $\frac{3}{8}$       E) None of the above
25. John took a bag of cookies to the school play rehearsal. Half were given to the actors and 5 to the director of the play. That left John with 15 cookies. How many cookies did he take to the rehearsal?
- A) 30      B) 45      C) 35      D) 25      E) None of these