Member: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Math Club

Mathematics League Competition

Practice Problems – Worksheet 1

1) If 84 players split themselves into teams, how many more teams can they form by splitting into teams of 4 instead of teams of 6?

2) $0×1+1×10+0×0+1= ?$

3) Three angles of a triangle can measure $20°, 40°, $and \_\_\_\_\_.

4) To the nearest tenth: $3456×0.001$

5) If my bad hair day began 720 minutes before 7:20 pm, then my bad hair day began at what time?

6) $500+500+500+500+500=10×$ \_\_\_\_\_.

7) Of the whole numbers $10, 11, …, 98, 99,$ how many are greater than the sum of their digits?

8) $1^{3}+2^{4}=$ ?

 a. $1^{4}+3^{2}$ b. $1^{3}+4^{2} $ c. $1^{2}+4^{3}$ d. $1^{1}+3^{4}$

9) 7 is prime, so May 7th is a *prime* day. In all, May has \_\_\_\_\_ prime days.

10) $\frac{2}{3}×\frac{4}{5}×\frac{6}{7}×\frac{7}{6}×\frac{5}{4}×\frac{3}{2}=$?

11) 500 nickels = \_\_\_\_\_ quarters

12) If a square’s side-lengths are integers, its perimeter could be:

 a. 33 b. 44 c. 55 d. 66

13) If 3 out of every 150 astronauts walk on the book, then \_\_\_\_\_% of all astronauts walk on the moon.

14) Of the following, which doesn’t reduce to $\frac{3}{5}$ ?

 a. $\frac{9}{15}$ b. $\frac{21}{35}$ c. $\frac{24}{40}$ d. $\frac{33}{50}$

15) $\sqrt{100}=\sqrt{36}+\sqrt{?}$

16) A(n) \_\_\_\_\_ can be made from 2 squares that share a common side.

 a. octagon b. hexagon c. rectangle d. triangle

17) By how much does the sum $19+28+37+46+55+64+73+82+91$ exceed the sum $18+27+36+45+54+63+72+81+90$?

18) Uncle Bookworm eats two books a week; Aunt Bookworm eats one book every two months. In a year, Uncle eats \_\_\_\_\_ more books than Aunt.

19) What is the largest odd factor of 81?

20) $\left(\frac{2}{3}\right)^{3}$= ?

21) At most how many students can sit in a row of 25 chairs, if seated students must be separated by at least one empty chair?

22) The smallest multiple of 10 that’s greater than $9∙9$ is:

 a. $9∙9+10$ b. $9.1∙9.1$ c. $9∙10$ d. $10∙10$

23) What is the difference between $\frac{5}{6}$ and its reciprocal is?

24) On my scooter, the real wheel’s diameter is 6 cm more than the front wheel’s. The real wheel’s circumference is \_\_\_\_ cm more than the front wheel’s.

 a. $3π$ b. $6π$ c. $9π$ d. $36π$

25) A regular polygon is always \_\_\_\_\_.

 a. square b. equilateral c. scalene d. isosceles

26) If I divide my age by 5, the remainder is 3. Your age is twice mine. If I divide your age by 5, the remainder will be \_\_\_\_\_.

 a. 1 b. 5 c. 3 d. 4

27) In a rectangle with perimeter 30 cm and area 56 cm2, the longer side’s length is \_\_\_\_\_ cm more than that of the shorter side.

28) If the sum of two whole numbers is 24 more than their difference, then one of the numbers *must* be \_\_\_\_\_.

 a. 0 b. 6 c. 12 d. 48

29) The first 12 contestants won an average of $80. The next 20 won an average of $70. The 32 contestants won an average of \_\_\_\_\_.

30) $4^{3}∙4^{3} $= ?

31) At most \_\_\_\_\_ circles with radius 1 with non-overlapping interiors can fit inside a square with side-length 4.

32) $0.1\%=1\%-$ \_\_\_\_\_.

33) Today is my birthday. My age today, in months, is 72 times my age 5 years ago, in years. My age today, in years is \_\_\_\_\_.

 a. 6 b. 7 c. 8 d. 12

34) $\sqrt{\sqrt{81∙81∙81∙81}}$ = ?

 a. 3 b. 9 c. 27 d. 81

35) Of 2005 integers whose product is even, at most \_\_\_\_\_ can be odd.

 a. 2005 b. 2004 c. 1 d. 0

36) The number \_\_\_\_\_ equals one-fourth of its own reciprocal.

 a. $\frac{1}{2}$ b. $\frac{1}{4}$ c. $2$ d. 4

37) How many numbers 11, 21, 31, 41, 51, 61, 71, 81, 91 are prime?

38) $\left(301+302+303+…+325\right)-\left(1+2+3+…+25\right)=$ ?

 a. 25 b. 2500 c. 5000 d. 7500



39) Of the following, which is the first time after 4:30 that the minute

and hour hands of the circular clock no longer form an acute angle?

 a. 4:36 b. 4:37 c. 4:38 d. 4:39

40) Consecutive letters of the alphabet, starting with A, are given increasing consecutive integer values. If $H+K+L+N=2005$, then the average of all 26 of the consecutive integers is \_\_\_\_\_.

 a. 491 b. 498 c. 503.5 d. 505.5