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2023-2024 Math League Preliminary Round

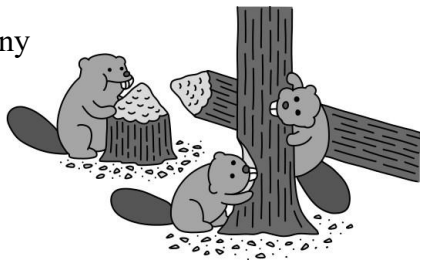
(Grade 3)

(Unofficial version, for reference only)

1. (2024 – 2023) + (24 – 23) =

   A) 0 B) 1 C) 2 D) 20

2. Beck's three baby brothers have 4 baby teeth each. How many baby teeth do Beck's baby brothers have all together?



   A) 7 B) 9

   C) 12 D) 16

3. 20 + 23 + 20 + 24 = 20 + 20 + 20 + 20 + ?

   A) 3 B) 4 C) 6 D) 7

4. Ida will get her driver's license in 84 months. In how many years will Ida get her license?

   A) 7 B) 8 C) 9 D) 12

5. Which of the following multiples of 2 is also a multiple of 4?

   A) 106 B) 110 C) 114 D) 116

6. Jan added $24 to her wallet, which doubled the amount of money in her wallet. What is the amount of money Jan has in her wallet now?

   A) $42 B) $48 C) $72 D) $96

7. The perimeter of a square with a side-length of 6 cm equals the perimeter of an equilateral triangle with a side-length of

   A) 4 cm B) 5 cm C) 7 cm D) 8 cm

8. Ana counted to 2024 by 4s, starting with 4. Exactly how many numbers did Ana count?

A) 253 B) 506 C) 2012 D) 2021

9. $1 \times 5 \times 2 \times 5 \times 3 \times 5 = 15 \times 25 \times$?

A) 2 B) 3 C) 5 D) 35

10. Wanda won 1 fewer prizes than Juan did. Wanda and Juan won a combined total of 25 prizes. How many prizes did Juan win?



A) 12 B) 13

C) 24 D) 26

11. If 1 month before my birthday month is December, then 3 months after my birthday month is

A) March B) April C) September D) December

12. Which of the following has the greatest value?

A) $(3 \div 3) + 3$ B) $(3 \div 3) \times 3$

C) $(3 + 3) \div 3$ D) $(3 \times 3) \div 3$

13. Joy has enough gifts to fill 9 gift bags with 8 gifts each. If Joy has filled 3 gift bags, how many gifts does she have left?

A) 24 B) 27 C) 36 D) 48

14. I divided the pigs in my pen into 7 equal groups and had 1 extra pig. How many pigs could there be in my pen?

A) 50 B) 52 C) 55 D) 56

15. Otto the otter swam 80 laps in 16 minutes. Swimming at this same rate, how many laps can Otto swim in 3 minutes?



A) 15 B) 18

C) 24 D) 28

16. On a list of 60 names, every 3rd name is underlined and every 4th name is circled. How many names on the list are both underlined and circled?

A) 3 B) 5 C) 15 D) 20

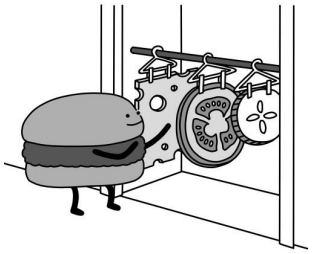
17. In 12 years, CJ will be double his current age. In how many years will CJ be triple his current age?

A) 24 B) 32 C) 36 D) 48

18. If the greatest common factor of two different even whole numbers is 6, their smallest possible sum is

A) 9 B) 12 C) 15 D) 18

19. A cheeseburger costs \$1 more than a plain burger. If 6 cheeseburgers cost \$48, how much does one plain burger cost?



A) \$6 B) \$7 C) \$8 D) \$9

20. $200 \times 200 \times 200 \times 200 = 2 \times 20 \times 200 \times 2000 \times$ _?_

A) 10 B) 100 C) 1000 D) 10 000

21. At a busy hotel, the line to check in has twice as many people as the line to check out. The total number of people in both lines could be

A) 103 B) 113 C) 123 D) 133

22. What is the greatest odd factor of $20 \times 23 \times 20 \times 24$?

A) 23 B) 115 C) 345 D) 1725

23. A theater has seats laid out in rows and each row has the same number of seats. If I removed 2 rows of seats, there would be 105 seats left. If I removed 5 rows of seats instead, there would be 60 seats left. How many seats are in the theater?

A) 110 B) 115 C) 135 D) 145

24. The least common multiple of the 4 smallest whole-number factors of 72 is

A) 4 B) 12 C) 24 D) 144

25. Kat cut a paper rectangle into exactly 6 identical squares. If the length of each side of each square is 8 cm, _?_ could have been the perimeter in cm of the rectangle before it was cut.

A) 112 B) 132 C) 152 D) 192

26. Stan started running on his birthday and ran every day after that until he had run 110 days in a row. If the 110th day Stan ran was the 16th Wednesday he ran, on what day was his birthday?

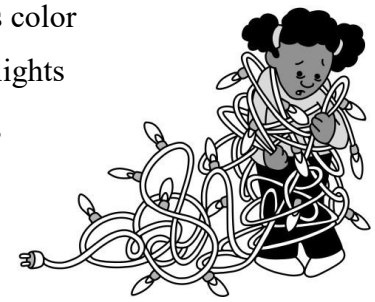


A) Thursday B) Friday C) Saturday D) Sunday

27. How many 2-digit whole numbers are divisible by 2 or 3 but not both?

A) 15 B) 30 C) 45 D) 60

28. My silly string of lights flashes once every 3 minutes, changes color once every 7 minutes, and beeps once every 9 minutes. If my lights did all three at 8:00 PM, at what time did my lights next blink, change color, and beep at the same time?



A) 9:03 PM B) 9:09 PM

C) 11:03 PM D) 11:09 PM

29. I added all the whole numbers whose digits were all 1s, starting at 1 and ending at 111 111 111 111 111. What was the tens digit of my sum?

A) 1 B) 3 C) 4 D) 5

30. Aya added each of the whole numbers from 10 through 49 and got 1180. Aurora first rounded each whole number from 10 through 49 to the nearest 10, and then added. What is the difference between Aya's sum and Aurora's sum?

A) 19 B) 20 C) 39 D) 40

31. The 5 players on my mathball team wear jerseys numbered 1000, 2000, 3000, 4000, and 5000. How many digits does the product of all 5 jersey numbers have?



A) 15 B) 16

C) 17 D) 18

32. What is the sum of the largest and smallest factors of 210?

A) 107 B) 210 C) 211 D) 212

33. Which of the following has the least value?

A) 16^{200} B) 8^{400} C) 4^{800} D) 2^{1600}

34. Kai got up at 8 AM and ate 1000 minutes later. He ate at

A) 12:40 AM B) 8:40 AM C) 12:40 PM D) 11:40 PM

35. The sum of 5 consecutive odd integers could be

A) 210 B) 315 C) 413 D) 517

Answers										
Question	1	2	3	4	5	6	7	8	9	10
Answer	**C**	**C**	**D**	**A**	**D**	**B**	**D**	**B**	**A**	**B**
Question	11	12	13	14	15	16	17	18	19	20
Answer	**B**	**A**	**D**	**A**	**A**	**B**	**A**	**D**	**B**	**B**
Question	21	22	23	24	25	26	27	28	29	30
Answer	**C**	**D**	**C**	**B**	**A**	**C**	**C**	**A**	**D**	**B**
Question	31	32	33	34	35					
Answer	**D**	**C**	**A**	**A**	**B**					