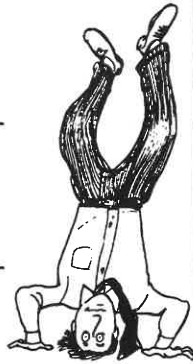Answers

26. While he was standing on his head, Flip decided to count backward from 777 by eights. Which of the following numbers did Flip count?

   A) 123   B) 125   C) 127   D) 129

26.

27. The cost of five apples is the same as the cost of six pears. If one apple costs 15 cents more than one pear, then what is the total cost of 5 apples and 6 pears?

   A) $3   B) $6   C) $9   D) $18

27.

28. What is the difference between 27 and the product of all its whole-number factors?

   A) 2   B) 27   C) 2×27 D) 26×27

28.

29. The prime factorization of a whole number less than 100 is the product of at most _?_ primes (not necessarily different).

   A) 3   B) 4   C) 5   D) 6

29.

30. A rectangle with sides of integer length is divided into a square region and a shaded rectangular region as shown. If the area of the shaded region is 8, the area of the entire figure is at most

   A) 24   B) 64   C) 72   D) 81

30.

31. Gabriel wrote his name 100 times in the sand. What was the 100th letter he wrote?

   A) a   B) b   C) r   D) i

31.

32. I put $100 in a savings account. At the end of each year, I earned 10% interest on the balance of my account at that point. With no deposits or withdrawals, after 5 years I had _?_ . (Round to the nearest dollar.)

   A) $162   B) $161   C) $160   D) $150

32.

33. Mrs. Andrews enjoys feeding the birds her special mix of birdseed. She mixes 1 part sunflower seed with 3 parts sesame seed to make a total of 200 6-kg bags. If sunflower seed comes in 12-kg bags, how many such bags does she need?

   A) 25   B) 34   C) 50   D) 67

33.

34. The product of 100 one hundreds is the same as the sum of _?_ one hundreds.

   A) 100^{100} B) 100^{99} C) 100^{10} D) 100^2

34.

35. $5^{21} \times 4^{11} \div 2 =$

   A) 10^{11} B) 10^{21} C) 10^{22} D) 10^{23}

35.

The end of the contest ✍ **6**

SIXTH GRADE MATHEMATICS CONTEST

2014-2015 Annual 6th Grade Contest
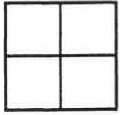
Tuesday, February 17 or 24, 2015

6

Instructions

- **Time** Do *not* open this booklet until you are told by your teacher to begin. You might be *unable* to finish all 35 questions in the 30 minutes allowed.

- **Scores** Please remember that *this is a contest, and not a test*—there is no "passing" or "failing" score. Few students score as high as 28 points (80% correct). Students with half that, 14 points, *should be commended!*

- **Format, Point Value, & Eligibility** Every answer is an A, B, C, or D. Write answers in the *Answers* column. A correct answer is worth 1 point. Unanswered questions get no credit. You **may** use a calculator.

61

1. Three cases of 24 cans each is the same number of cans as twelve boxes of ?_ cans each.
   A) 6 B) 15 C) 21 D) 96

2. A trapezoid has ?_ sides.
   A) 3 B) 4 C) 5 D) 10

3. Abby put an X through 7 of the 28 days in this month. Abby put an X through ?_ of the days.
   A) 0.07 B) 0.25 C) 0.28 D) 0.35

4. $60 \div 4 = 3 \times \underline{?}$
   A) 20 B) 12 C) 6 D) 5

5. $30 \times 40 \times 50 = 120 \times \underline{?}$
   A) 50 B) 200 C) 500 D) 600

6. If 3 out of 4 of the students in my class have brown eyes, and there are 24 students in my class, then how many have brown eyes?
   A) 6 B) 8 C) 18 D) 21

7. Four identical squares, each with a perimeter of 36, are put together as shown to make one big square. What is the perimeter of the big square?
   A) 36 B) 48 C) 72 D) 144

8. $80 + (160 + 240) \div 4 = 40 + 80 + (120 \div \underline{?})$
   A) 4 B) 2 C) 1 D) 0

9. In which of the following divisions is the remainder greatest?
   A) $1111 \div 8$ B) $2222 \div 7$ C) $3333 \div 6$ D) $4444 \div 5$

10. Of the following, which is a factor of $20 \times 14 \times 20 \times 15$?
    A) 13 B) 11 C) 9 D) 7

11. Thok has a simple plan. He will spend 50% of the day in the cave, 25% of the rest of the day on the hunt, and the remains of the day watching films outside. How many hours will Thok spend watching films?
    A) 3 B) 6 C) 9 D) 25

12. $2 \times 3 \times 6 \times 36 \times 6 \times 3 \times 2 \times 36 \times 6 \times 3 =$
    A) 6^5 B) 6^6 C) 6^7 D) 6^8

13. I have 5 pennies, 4 nickels, 3 quarters, 2 half-dollars, and 1 dollar. The average value of one of my coins is
    A) $0.20 B) $0.60 C) $1.50 D) $3.00

---

14. Wyatt O'Vine's sheep weighs twice as much as Wyatt, and Wyatt weighs twice as much as his hat. If Wyatt, his sheep, and his hat have a combined weight of 210 kg, how much does Wyatt weigh?
    A) 30 kg B) 35 kg C) 60 kg D) 70 kg

15. The least common multiple of 24 and 30, minus the greatest common factor of 24 and 30, is
    A) 114 B) 117 C) 234 D) 237

16. Two consecutive whole numbers cannot have a sum that is
    A) a prime B) a perfect square C) a multiple of 13 D) an even number

17. The greatest prime factor of the number of minutes in a week is
    A) 5 B) 7 C) 12 D) 21

18. $(12 + 34) \times (56 + 78) = 12 \times (56 + 78) + \underline{?} \times (56 + 78)$
    A) 12 B) 34 C) 56 D) 78

19. Seth eats an apple at 4 P.M. on Monday and then waits 100 hours before he eats another. He eats his next apple at ?_ on Friday.
    A) noon B) 4 P.M. C) 8 P.M. D) midnight

20. If 2 flocks equal 5 flecks, then 500 flocks equal ?_ flecks.
    A) 200 B) 250 C) 1000 D) 1250

21. $\left(\sqrt{64} + \sqrt{64}\right)^2 =$
    A) 16 B) 64 C) 128 D) 256

22. If one angle of a triangle is 10 degrees smaller than another and 20 degrees smaller than the third, what is the largest angle in the triangle?
    A) 70° B) 75° C) 80° D) 90°

23. In 4 hours Rob rode 120 km. He drove at an average rate of ?_ m/min.
    A) 30 B) 105 C) 120 D) 500

24. Clara the alligator has laid 65% of her eggs. If she has laid 13 eggs, how many eggs are left to be laid?
    A) 6 B) 7 C) 13 D) 20

25. If the sum of seven consecutive even numbers is 182, the smallest of the seven numbers is
    A) 20 B) 23 C) 26 D) 32