

26. Lex had 144 coins left after giving one-third of his coins to Clark and one-third of his remaining coins to Lois. How many coins did he give Lois?



- A) 72 B) 48 C) 36 D) 32

27. The ones digit of the fourth power of an integer cannot be

- A) 1 B) 3 C) 5 D) 6

28. Penelope paid \$24.58 for pens and pencils. If pens cost 9¢ each and pencils cost 4¢ each, at most how many pens did Penelope purchase?

- A) 273 B) 272 C) 271 D) 270

29. My average score on 8 math tests is 90. If my average score on the first 5 tests was 87, what was my average score on the last 3 tests?

- A) 96 B) 95 C) 94 D) 93

30. The cost of my algebra book is 200% of that of my geometry book. The cost of my geometry book is $\frac{4}{3}$ that of my calculus book. If my calculus book costs \$21, how much do all 3 books cost together?

- A) \$28 B) \$56 C) \$84 D) \$105

31. Of the integers from 1 to 1000, how many are multiples of 3, 4, and 5?

- A) 14 B) 15 C) 16 D) 17

32. If the sum of 9 consecutive odd integers is 1935, what is the sum of the next 9 consecutive odd integers?

- A) 2015 B) 2017 C) 2097 D) 2099

33. $3^{336} \times 9^{336} \times 27^{336} =$

- A) 3^{1008} B) 3^{1344} C) 3^{1680} D) 3^{2016}

34. Increasing the radius of a circle by 50% increases its area by ? %.

- A) 50 B) 100 C) 125 D) 150

35. A person's initials are two letters in a specific order. If everyone has initials, what is the fewest number of people who must attend a party to be sure that three of the people will have the same initials?



- A) 1353 B) 1352 C) 677 D) 676

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2015-2016 Annual 6th Grade Contest

Tuesday, February 16 or 23, 2016




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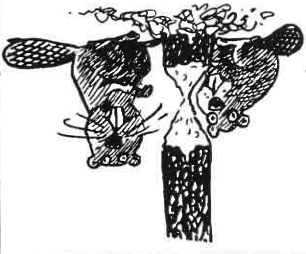
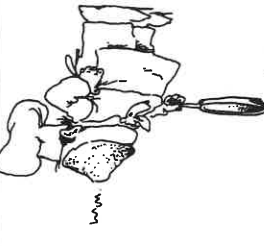
Instructions

- **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.



The end of the contest 6

13.	<p>I donate a \$100 bill, 2 \$50 bills, 3 \$20 bills, 4 \$10 bills, and 5 \$5 bills. If 5 people divide my money equally, each person receives</p> <p>A) \$37 B) \$65 C) \$70 D) \$75</p>	
14.	<p>Peter ran at 4m/s. Paul started at the same spot 6 sec. later and chased Peter at 7 m/s. Paul needed $\frac{?}{?}$ seconds to catch Peter.</p> <p>A) 6 B) 7 C) 8 D) 14</p>	
15.	<p>The product of two different nonzero integers cannot be</p> <p>A) prime B) zero C) even D) composite</p>	
16.	<p>What is the largest factor of $2^2 \times 3^3 \times 5^5 \times 7^7 \times 11^{11}$ less than 100?</p> <p>A) 66 B) 77 C) 88 D) 99</p>	
17.	<p>The number of hours in 10 days = the number of minutes in $\frac{?}{?}$ hours.</p> <p>A) 2 B) 3 C) 4 D) 6</p>	
18.	<p>If the last 2 digits of an integer are 84, the integer must be divisible by</p> <p>A) 4 B) 8 C) 9 D) 16</p>	
19.	<p>The maximum number of intersection points of 4 different circles is</p> <p>A) 16 B) 12 C) 8 D) 6</p>	
20.	<p>What percent of 20 is 50?</p> <p>A) 40 B) 140 C) 200 D) 250</p>	
21.	<p>The sum of 2016 integers is even. At most $\frac{?}{?}$ of them can be odd.</p> <p>A) 2016 B) 2015 C) 1 D) 0</p>	
22.	<p>The measure of one angle in a triangle is $\frac{3}{1}$ of a second angle in the triangle and $\frac{6}{1}$ of the third one. The measure of the largest angle is</p> <p>A) 108° B) 72° C) 54° D) 18°</p>	
23.	<p>When the square of the perimeter of a certain square is divided by the area of this square, the quotient is</p> <p>A) 2 B) 4 C) 8 D) 16</p>	
24.	<p>1000 m per second = $\frac{?}{?}$ km per hour</p> <p>A) 60 B) 360 C) 3600 D) 6000</p>	
25.	<p>The circumference of a circle with radius π is</p> <p>A) π B) 2π C) π^2 D) $2\pi^2$</p>	

1.	<p>$2 \times 2016 = 8 \times \frac{?}{?}$</p> <p>A) 504 B) 508 C) 1008 D) 8064</p>	
2.	<p>Bert Sampson sold his 2 beavers for \$222.22 each. Mho gave him \$500 for them. How much change should Bert give Mho?</p> <p>A) \$277.78 B) \$277.88 C) \$55.56 D) \$55.66</p>	
3.	<p>What is the sum of the measures of the angles in a trapezoid?</p> <p>A) 90° B) 180° C) 270° D) 360°</p>	
4.	<p>$10 \times 20 \times 30 \times 40 = 24 \times \frac{?}{?}$</p> <p>A) 10^3 B) 10^4 C) 10^5 D) 10^6</p>	
5.	<p>$1 + 2 + 3 + 4 + 996 + 997 + 998 + 999 =$</p> <p>A) 3998 B) 3999 C) 4000 D) 4001</p>	
6.	<p>Which of the following is <i>not</i> a factor of 2016?</p> <p>A) 10 B) 9 C) 8 D) 7</p>	
7.	<p>What is the sum of the tenths and the hundredths digits in the number 12345.6789?</p> <p>A) 7 B) 11 C) 13 D) 15</p>	
8.	<p>If 1 out of 6 lightbulbs is defective and there are 2016 lightbulbs, how many of them are not defective?</p> <p>A) 5 B) 336 C) 1680 D) 2016</p>	
9.	<p>The time twelve thousand and twelve hours after 7 A.M. is</p> <p>A) 1 A.M. B) 1 P.M. C) 7 A.M. D) 7 P.M.</p>	
10.	<p>The product of two different primes has $\frac{?}{?}$ divisors.</p> <p>A) 3 B) 4 C) 5 D) 6</p>	
11.	<p>While eating pancakes, Adam ate $\frac{1}{4}$ of them, Jerry ate $\frac{2}{7}$, Steve ate $\frac{10}{3}$, and Dan ate the rest. Who ate the greatest number of pancakes?</p> <p>A) Adam B) Jerry C) Steve D) Dan</p>	
12.	<p>The greatest common factor is smallest for which of the following pairs of numbers?</p> <p>A) 4 & 18 B) 5 & 25 C) 6 & 33 D) 8 & 35</p>	