






<p>25. Joy walks 60 m to a slide in 180 sec. and slides down 9 times faster than she walks. If it takes 30 sec. to slide down, how long is the slide?</p> <p>A) 90 m B) 180 m C) 270 m D) 810 m</p>		<p>25.</p>
<p>26. If $\frac{2}{3}$ of a number is $\frac{1}{2}$, then $\frac{1}{6}$ of the number is</p> <p>A) $\frac{1}{8}$ B) $\frac{2}{9}$ C) $\frac{3}{16}$ D) $\frac{4}{15}$</p>		<p>26.</p>
<p>27. What percent of 24 seconds is 4 hours?</p> <p>A) 600% B) 3600% C) 60 000% D) 360 000%</p>		<p>27.</p>
<p>28. Abe's height is 40% greater than Bo's height, and Bo's height is 25% less than Cal's height. Abe's height is what percent of Cal's height?</p> <p>A) 25% B) 85% C) 95% D) 105%</p>		<p>28.</p>
<p>29. The least integer power of 12 that is divisible by 18^{180} is</p> <p>A) 12^{120} B) 12^{180} C) 12^{240} D) 12^{360}</p>		<p>29.</p>
<p>30. Subtract the sum of all even integers between 19 and 121 from the sum of all odd integers between 20 and 122. What is the difference?</p> <p>A) 1 B) 51 C) 100 D) 101</p>		<p>30.</p>
<p>31. What is the volume of a rectangular box if three of its faces have areas of 30, 70, and 84?</p> <p>A) 184 B) 368 C) 420 D) 176 400</p>		<p>31.</p>
<p>32. The sum of 4 consecutive even integers <i>cannot</i> be</p> <p>A) 4 B) 12 C) 16 D) 20</p>		<p>32.</p>
<p>33. If the product of all prime numbers between 1 and 210 is divided by 210, the remainder is</p> <p>A) 0 B) 3 C) 7 D) 21</p>		<p>33.</p>
<p>34. Amy picks 3 of the 7 colors of the rainbow, but she doesn't pick red with green, and she doesn't use blue at all. How many different combinations of 3 colors can Amy pick?</p> <p>A) 10 B) 16 C) 20 D) 24</p>		<p>34.</p>
<p>35. The length of one side of a triangle is between 9 and 11. The perimeter of the triangle could be</p> <p>A) 11 B) 16 C) 18 D) 38</p>		<p>35.</p>

The end of the contest  7



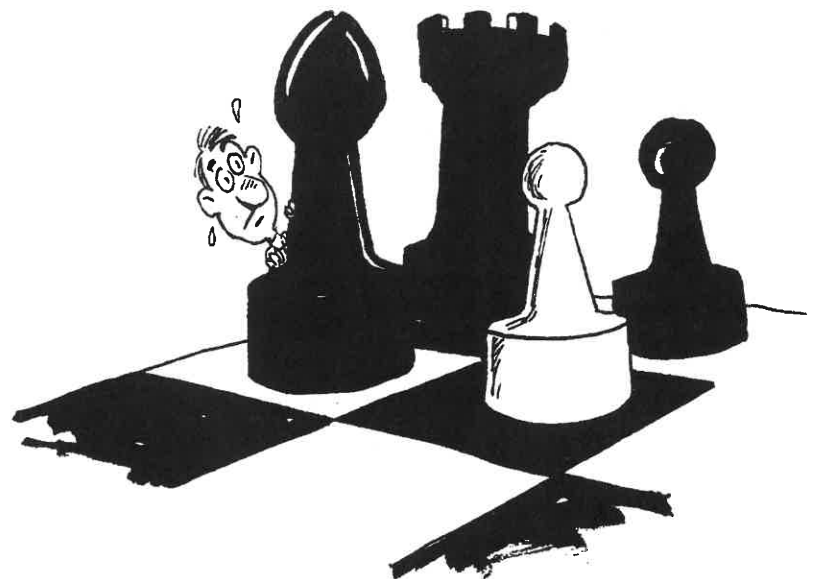
2010-2011 Annual 7th Grade Contest

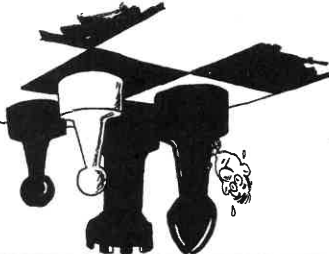


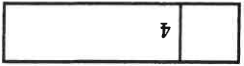
Tuesday, February 15 or 22, 2011

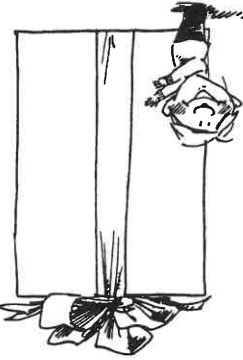
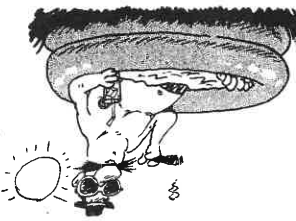

7

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.



14.	<p>Of 20 chess pieces on a board, 12 are white and the others are black. The ratio of black pieces to all pieces is</p> <p>A) 1:2 B) 1:4 C) 2:3 D) 2:5</p> 
15.	<p>Add the cube and the square of $\sqrt{2}$ to get 12.</p> <p>A) 2 B) 4 C) 16 D) 64</p> 
16.	<p>My seven Larry Kotter books have 300 pages each, and my five Chronicles of Blarnia books have 324 pages each. What is the average number of pages per book in all 12 books?</p> <p>A) 310 B) 312 C) 314 D) 316</p>
17.	<p>What is the product of the reciprocals of the first 3 integers that are squares of positive integers?</p> <p>A) $\frac{1}{576}$ B) $\frac{1}{36}$ C) 36 D) 576</p> 
18.	<p>A rope 12 m long is cut into 4 pieces of equal length. Each piece is wrapped exactly once around the circumference of one of four identical car wheels. The diameter of one wheel is $\frac{2}{3}$ m.</p> <p>A) 6π B) 3π C) $\frac{\pi}{3}$ D) $\frac{2\pi}{3}$</p>
19.	<p>The sum of four consecutive whole numbers is 110. What is the sum of the least and the greatest of the four numbers?</p> <p>A) 53 B) 55 C) 57 D) 58</p>
20.	<p>If one angle of a triangle is acute, and a second angle of the triangle is obtuse, then the third angle of the triangle must be</p> <p>A) acute B) obtuse C) right D) scalene</p>
21.	<p>A square and a rectangle share a side of length 4 as shown. The area of the entire figure is 64. The perimeter of the entire figure is</p> <p>A) 52 B) 48 C) 44 D) 40</p> 
22.	<p>What time is it exactly 1 440 000 minutes after 10 AM?</p> <p>A) 10 AM B) 11 AM C) 10 PM D) 11 PM</p>
23.	<p>The ratio 6:8.4 is equivalent to</p> <p>A) 2:4.4 B) 3:5 C) 5:7 D) 6.8:4</p>
24.	<p>One angle of a parallelogram is 5 times another angle of the parallelogram. The measure of the largest angle of the parallelogram is</p> <p>A) 100° B) 120° C) 150° D) 160°</p>

1.	<p>$\frac{1}{2011} \times 2012 =$</p> <p>A) 2013 B) 2011 C) 2 D) 1</p>
2.	<p>$(4+3) \times (5+2) \times (6+1) =$</p> <p>A) 3×7 B) 7×7 C) 3^7 D) 7^3</p>
3.	<p>Ben finished wrapping 30 boxes at 1:30 PM. If Ben wrapped 1 box every 5 minutes, then he started wrapping the boxes at $\frac{1}{2}$ AM.</p> <p>A) 10:30 B) 11:00 C) 11:30 D) 11:50</p> 
4.	<p>$2\frac{2}{3} + 3\frac{5}{4} =$</p> <p>A) $5\frac{5}{3}$ B) $5\frac{11}{11}$ C) $6\frac{5}{3}$ D) $6\frac{11}{20}$</p>
5.	<p>The ones digit of the cube of 432 is</p> <p>A) 8 B) 6 C) 4 D) 2</p>
6.	<p>If each of the following numbers is rounded to the nearest whole number and then divided by 3, which has the greatest remainder?</p> <p>A) 14.45 B) 15.82 C) 16.39 D) 17.99</p>
7.	<p>One prime factor of 351 is 3. Another prime factor of 351 is</p> <p>A) 7 B) 13 C) 39 D) 117</p>
8.	<p>The measures of the smallest and largest angles of a right triangle could differ by</p> <p>A) 1° B) 30° C) 62° D) 91°</p> 
9.	<p>Mr. L. C. M. refills his drink every 45 minutes and his pool every 105 minutes. If he refills both at 1:00 PM, then he next refills both at the same time at</p> <p>A) 3:30 PM B) 4:30 PM C) 6:15 PM D) 7:15 PM</p>
10.	<p>If 6 cronks = 14 crunks, then 9 cronks = $\frac{1}{2}$ crunks.</p> <p>A) 24 B) 21 C) 20 D) 17</p>
11.	<p>When 20 is divided by 40%, the quotient is</p> <p>A) $\frac{1}{2}$ B) 8 C) 25 D) 50</p>
12.	<p>What is the area of the shaded region of the square?</p> <p>A) 8 B) 16 C) 28 D) 36</p> 
13.	<p>How many prime numbers are between 80 and 90?</p> <p>A) 1 B) 2 C) 3 D) 4</p>