

29. Just as $12 = 2 \times 2 \times 3$ is the product of 3 primes, not all different, 1 000 000 000 000 is the product of ? primes, not all different.

- A) 20 B) 24 C) 48 D) 50

30. I rode 24 km in 3 hrs. Al went twice as far in half the time when he rode at the rate of

- A) 8 km/hr B) 16 km/hr
C) 32 km/hr D) 64 km/hr



31. Which can be written as the sum of 3 consecutive odd numbers?

- A) 100 B) 99
C) 98 D) 97

32. 20% of 0.5% =

- A) 0.1% B) 1% C) 10% D) 10

33. Dividing $\frac{1}{2}$ by $\frac{2}{3}$ yields the same result as multiplying $\frac{2}{3}$ by

- A) 2 B) $\frac{9}{8}$ C) $\frac{3}{4}$ D) $\frac{1}{2}$

34. Exactly ? different even whole numbers are factors of $2 \times 3 \times 5 \times 7$.

- A) 1 B) 6 C) 7 D) 8

35. You earn 0.5% of what I earn. I earn ?% of what you earn.

- A) 2 B) 200 C) 2000 D) 20 000

36. $(1 - \frac{1}{2}) \times (1 - \frac{1}{3}) \times (1 - \frac{1}{4}) \times \dots \times (1 - \frac{1}{100}) =$

- A) $\frac{1}{100}$ B) $\frac{1}{99}$ C) $\frac{9}{10}$ D) $\frac{99}{100}$

37. Using whole number ages, if Al: Ed = 3:5, then Al+Ed *could* be

- A) 62 B) 72 C) 82 D) 92

38. If a square has whole-number side-lengths, its area could be

- A) 7^3 B) 8^3 C) 9^3 D) 10^3

39. Of 50 people, if 20 sing, 20 dance, and 15 do both, then ? do neither.

- A) 5 B) 10 C) 15 D) 25



40. Grandma and Grandpa danced for 20 minutes one day; for each of the next 91 days, they danced for one minute longer than they had on the day before. On those 92 days, they danced for a total of ? minutes.

- A) 1820 B) 5106 C) 6026 D) 6072

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2008-09 Annual 7th Grade Contest

Tuesday, February 17 or 24, 2009

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Instructions

- **Time** You will have only 30 minutes working time for this contest. You might be *unable* to finish all 40 questions in the time allowed.
- **Scores** Please remember that *this is a contest, not a test*—and there is no “passing” or “failing” score. Few students score as high as 30 points (75% correct). Students with half that, 15 points, *should be commended!*
- **Format and Point Value** This is a multiple-choice contest. Each answer is an A, B, C, or D. Write each answer in the *Answers* column to the right of each question. A correct answer is worth 1 point. Unanswered questions get no credit. You **may** use a calculator.



The end of the contest 7

1.	A) 50 B) 95 C) 96 D) 100	2. I can make 6 equal stacks from 200 dimes if $\frac{1}{2}$ dimes are left over.	3. The hour hand of a standard 12-hour circular clock moves a total of 60° in $\frac{1}{2}$ hours.	4. The average number of days per year in the 4 years from 2009 through 2012 is A) 365.00 B) 365.10 C) 365.25 D) 365.75	5. What is $\frac{3}{1}$ of $\frac{4}{1}$ of 300? A) 25 B) 75 C) $\frac{400}{1}$ D) $\frac{3600}{1}$	6. By how many halves does 4.5 exceed 1.5? A) 1 B) 3 C) 6 D) 9	7. Of the following, which is a multiple of both 4 and 6? A) 1246 B) 2412 C) 4664 D) 6424	8. $1 \times 10 \times 100 \times 1000 =$ A) 1111 B) 11110 C) 1000000 D) 1111000000	9. $4 \times (4+5) + 5 \times (4+5) =$ A) 9^2 B) 99 C) $9 + 9^2$ D) 9^3	10. 15 is the sum of <i>at most</i> $\frac{1}{2}$ consecutive positive integers. A) 2 B) 3 C) 4 D) 5	11. Chef Smile is smiling because his hourly salary was raised 25%, from \$40 to A) \$15 B) \$30 C) \$50 D) \$65	12. Divide a prime by an even number. The result of this division <i>cannot</i> be A) even B) odd C) whole D) 1	13. $18^2 \times 9 = 9^2 \times \frac{1}{2}$ A) 18 B) 2^2 C) 3^2 D) 6^2	14. What fractional part of eight is eight-hundredths? A) $\frac{1}{100}$ B) $\frac{1}{8}$ C) $\frac{100}{64}$ D) $\frac{10}{8}$
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15.	As shown, $\triangle ABC$ and $\triangle ACD$ are both equilateral and have side \overline{AC} in common. What is $m\angle BCD$? A) 60 B) 120 C) 150 D) 180	16. We walked the same path up a hill, then down, with no break. We began at 3:15 P.M. and finished at 4:30 P.M. We walked the downhill part twice as fast as the uphill part. We began to walk downhill at A) 3:40 P.M. B) 3:55 P.M. C) 4:00 P.M. D) 4:05 P.M.	17. $1 \text{ km} \div 1 \text{ cm} =$ A) 100 000 B) 10 000 C) 1000 D) 100	18. 3 thousand + 30 thousandths = A) 33 000 B) 3000.03 C) 3000.003 D) 0.330	19. What is the product of all the whole-number factors of 24^4 ? A) 24 B) 24^2 C) 24^3 D) 24^4	20. $\sqrt{16} \times \sqrt{8} \times \sqrt{4} \times \sqrt{2} = 16 \times \frac{1}{2}$ A) 2 B) 4 C) 8 D) 64	21. $12 + 72 \div 6 \times 2 =$ A) 7 B) 18 C) 28 D) 36	22. $\frac{11}{10} + \frac{101}{100} + \frac{1001}{1000} =$ A) $3\frac{1}{10}$ B) $3\frac{10}{3}$ C) $3\frac{1}{1000}$ D) $3\frac{1000}{111}$	23. $24 \times 26 \times 28 \times 30 = 12 \times 13 \times 14 \times 15 \times \frac{1}{2}$ A) 16 B) 12 C) 4 D) 2	24. What percent of 60 is 20% of 30? A) 1% B) 10% C) 40% D) 100%	25. How many more thirds than halves equal 30? A) 5 B) 15 C) 20 D) 30	26. The distance between 2 points on a circle with area π is at <i>most</i> A) 0.5 B) 1 C) 2 D) 4	27. The reciprocal of $(\frac{1}{2} + 2)$ is A) $\frac{5}{2}$ B) $\frac{3}{2}$ C) $\frac{2}{3}$ D) $\frac{2}{5}$	28. If 2 <i>different</i> polygons average 5 sides each, one polygon could be A) a pentagon B) a hexagon C) an octagon D) a decagon
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