



Thirty-Second Annual Sixth Grade Math Blast

First Stage

*Directions:*

1. Use a #2 pencil.
2. Scratch paper may be used. You may write on this test.
3. Put your NAME and SCHOOL on the Scantron answer sheet
4. Transfer answers to Scantron carefully; be sure to make marks dark and erasures clean.
5. There is no penalty for guessing.
6. All fractions are to be simplified.
7. Use 3.14 for  $\pi$ .

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1. What is the value of  $\frac{3}{4} \times \frac{7}{8} \times \frac{15}{16}$ , rounded to the nearest 0.25?
    - a. 0.25
    - b. 0.50
    - c. 0.75
    - d. 1.00
    - e. None of These
  2. A decagon has   ? sides?
    - a. 5
    - b. 6
    - c. 8
    - d. 10
    - e. None of These
  3. The dimensions of four rectangles are given below. Which has an area different from the area of each of the other three?
    - a.  $13 \times 25$
    - b.  $7 \times 45$
    - c.  $15 \times 21$
    - d.  $9 \times 35$
    - e. None of These
  4. The average degree-measure of an angle of a triangle is
    - a.  $45^\circ$
    - b.  $60^\circ$
    - c.  $90^\circ$
    - d.  $180^\circ$
    - e. None of These



5. Which is 25% of  $100 \times 100$ ?

- a.  $400 \times 400$
- b.  $200 \times 200$
- c.  $50 \times 50$
- d.  $25 \times 25$
- e. None of These

9.  $\sqrt{16 \times 25}$ ?

- a.  $\sqrt{40}$
- b. 10
- c. 20
- d. 100
- e. None of These

6. 1% of 1% is?

- a. 1
- b. 1%
- c.  $\frac{1}{100}$
- d.  $\frac{1}{100}\%$
- e. None of These

10. Of the following fractions, which is the largest?

- a.  $\frac{3}{4}$
- b.  $\frac{5}{8}$
- c.  $\frac{11}{16}$
- d.  $\frac{37}{64}$
- e. None of These

7.  $(2 - \frac{1}{2}) \times (2 - \frac{2}{3}) \times (2 - \frac{3}{4}) \times (2 - \frac{4}{5}) =$

- a.  $\frac{1}{6}$
- b.  $\frac{1}{2}$
- c. 3
- d.  $3\frac{1}{2}$
- e. None of These

11.  $2 \div 4 + 4 \div 8 =$

- a. 2
- b. 1
- c. 0.5625
- d. 0.03125
- e. None of These

8. Which is not a factor of the product of the first 100 primes?

- a. 111
- b. 222
- c. 555
- d. 999
- e. None of These

12. What is the sum of all the whole number factors of 6?

- a. 5
- b. 6
- c. 11
- d. 12
- e. None of These



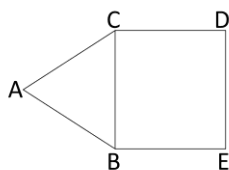
13. The first page of volume two in the "Encyclopedia of Cooking" is numbered 257. If the last page is numbered 506, how many pages are in volume two?

- a. 506
- b. 257
- c. 250
- d. 249
- e. None of These

14.  $22.222 + 2.22 + 0.2 =$

- a. 22.446
- b. 0.022446
- c. 24.624
- d. .024624
- e. None of These

15. If equilateral triangle ABC has side  $\overline{AB}$  in common with square BCDE, what is the measure of angle ACD?



- a.  $270^\circ$
- b.  $150^\circ$
- c.  $140^\circ$
- d.  $120^\circ$
- e. None of These

16. Of the following, which is closest in value to 8.01?

- a. 8
- b. 8.1
- c. 8.11
- d. 9.01
- e. None of These

17. Thi runs at 5 m/sec and skates at 8 m/sec. How far can Thi skate in the same time it takes Thi to run 80m?

- a. 50m
- b. 128m
- c. 240m
- d. 640m
- e. None of These

18.  $(32 \div 16) + (16 \div 8) + (8 \div 4) + (4 \div 2)?$

- a. 2
- b. 8
- c. 16
- d. 30
- e. None of These



19. Friday, each brownie costs 25¢. Saturday, they're 6 for \$1. For \$6, I can buy ? more brownies on Saturday than on Friday.
- a. 2
  - b. 12
  - c. 24
  - d. 36
  - e. None of These
20. One-half of 50% of one-half is
- a. 0.125
  - b. 0.25
  - c. 0.5
  - d. 12.5
  - e. None of These
21.  $12^2 + 43^2 =$
- a. 1993
  - b. 1983
  - c. 110
  - d.  $55^2$
  - e. None of These
22. The complement of an acute angle is always \_\_\_\_\_ angle.
- a. an acute
  - b. a right
  - c. an obtuse
  - d. a straight
  - e. None of These
23. Ten million divided by two million equals
- a. 5
  - b. 20
  - c. 5 million
  - d. 6 million
  - e. None of These
24.  $(360 \times 0.25 \times \frac{1}{9}) \div 10?$
- a. 0
  - b. 1
  - c. 9
  - d. 10
  - e. None of These
25. The total of 5 pennies, 8 nickels and 3 quarters is the same as the value of
- a. 5 dimes
  - b. 8 dimes
  - c. 12 dimes
  - d. 120 dimes
  - e. None of These
26.  $6\text{hrs } 54\text{min} + 4\text{hrs } 56\text{min} =$
- a. 10hrs 10mins
  - b. 10hrs 50mins
  - c. 11hrs 10mins
  - d. 11hrs 50mins
  - e. None of These



27. Robin's math test scores are 89, 90, 92 and 95. What is her median score?
- a. 89
  - b. 90
  - c. 92
  - d. 95
  - e. None of These
28. If 150% of a certain number is 300, then 100% of the same number is
- a. 100
  - b. 150
  - c. 160
  - d. 200
  - e. None of These
29. Jesse takes a 20 question true-false test. If he guesses randomly on every question, what is the probability he will get every question right?
- a. 0
  - b.  $\left(\frac{1}{2}\right)^{20}$
  - c.  $\frac{1}{2(20)}$
  - d.  $\frac{1}{2}$
  - e. None of These
30. It takes ten workers to machine 150 parts a day. How many workers does it take to machine 60 parts in one day?
- a. 3
  - b. 4
  - c. 5
  - d. 6
  - e. None of These
31. Andrea has some lizards and birds. There are 30 heads and 76 feet. How many lizards does Andrea have?
- a. 7
  - b. 8
  - c. 22
  - d. 23
  - e. None of These
32. Kane has four different colored train cars, yellow, red, green and blue. How many different ways can he arrange his train cars?
- a. 4
  - b. 8
  - c. 12
  - d. 24
  - e. None of These



33. The original price of a dress is \$125. The dress is on sale for 40% off. How much is the sale price?
- a. \$31.25
  - b. \$50
  - c. \$75
  - d. \$93.75
  - e. None of These
34. Which equation uses the identity property of addition?
- a.  $|-5| = 5$
  - b.  $-8 + 0 = -8$
  - c.  $-6 + 3 = 3 + (-6)$
  - d.  $4 + (1 + 7) = (4 + 1) + 7$
  - e. None of These
35. Which expression is equivalent to  $|9 - (-5)|$ ?
- a.  $|9| + |-5|$
  - b.  $|9| - |-5|$
  - c.  $-14$
  - d. 4
  - e. None of These
36. Simplify  $6 - (8 - 3^3) - 4$ .
- a. -7
  - b. -15
  - c. -25
  - d. 21
  - e. None of These
37. How many cars are produced in 12 hours at a factory where 2 cars are built every 45 minutes?
- a. 16
  - b. 32
  - c. 36
  - d. 48
  - e. None of These
38. Solve  $-6x + 20.4 = 48$  for  $x$ .
- a.  $x = -11.4$
  - b.  $x = 11.4$
  - c.  $x = -4.6$
  - d.  $x = -4.2$
  - e. None of These
39. Write  $0.\bar{7}$  as a fraction?
- a.  $\frac{77}{100}$
  - b.  $\frac{7}{10}$
  - c.  $\frac{77}{99}$
  - d.  $\frac{7}{9}$
  - e. None of These
40. 328% of 82 is closest to what number?
- a. 246
  - b. 264
  - c. 287
  - d. 298
  - e. None of These



41. There are 72 boys in the 6<sup>th</sup> grade. The other 55% of the class are girls. How many girls are there?
- a. 55
  - b. 72
  - c. 88
  - d. 127
  - e. None of These
42. Find the value of  $|a| - b^2$  when  $a = -3$  and  $b = -5$ .
- a. -28
  - b. -22
  - c. -7
  - d. 4
  - e. None of These
43. Which one of these is not a real number?
- a.  $\frac{0}{4}$
  - b.  $\frac{5}{8}$
  - c. -87
  - d.  $\frac{7}{0}$
  - e. None of These
44.  $9 \times 11 =$
- a.  $10^2 - 1$
  - b.  $10^2$
  - c.  $11^2$
  - d.  $10^2 + 1$
  - e. None of These
45. When Ian gave me 8 coins worth 25¢, he gave me exactly
- a. 1 nickel
  - b. 2 dimes
  - c. 3 nickels
  - d. 5 pennies
  - e. None of These
46. The sum of 11 different whole numbers can be ?, but never less.
- a. 11
  - b. 45
  - c. 55
  - d. 66
  - e. None of These
47. A prime number divided by its reciprocal will never be
- a. prime
  - b. 9
  - c. even
  - d. odd
  - e. None of These



48. Soraya placed four  $3 \times 5$  photos on a page in her photo album, without overlapping. If a page measures  $8 \times 12$ , what is the area of that part of the page not covered by photos?

- a. 27
- b. 35
- c. 36
- d. 81
- e. None of These

49. Quincey's unicycle wheel is a circle whose area is  $400\pi \text{ cm}^2$ . It's circumference is ? cm.

- a.  $20\pi$
- b.  $40\pi$
- c. 40
- d. 400
- e. None of These

50. How many whole-number factors of 36 are there?

- a. 6
- b. 8
- c. 9
- d. 18
- e. None of These