

Find the product of three and forty-eight thousandths with four and six hundredths.

- A) 16.008 B) 14.1288 C) 12.37488 D) 14.0208 E) None of these Answers

$(123 \times 82) + (123 \times 40) + (50 \times 123) = \underline{\quad ? \quad}$ A) $(40 \times 3 + 40 \times 11) + 23$ B) 123×2^3

- C) $(10^2 \times 2^3) \times 123$ D) $(2 \times 3 \times 5 + 3 \times 5 \times 7) \times 2^3$ E) None of these Answers

Which property states: $(5)(17)(23) = (5)(23)(17)$

- A) Distributive B) Commutative C) Associative D) Multiplication E) None of these Answers

What is the prime factorization of 1520? A) $2 \times 2 \times 2 \times 2 \times 5 \times 19$ B) $2 \times 2 \times 2 \times 3 \times 5 \times 19$

- C) $2 \times 2 \times 2 \times 2 \times 5 \times 5 \times 19$ D) $2 \times 2 \times 2 \times 2 \times 5 \times 7 \times 11$ E) None of these Answers

During the afternoon school break, \$57.30 was collected by selling 46 candy bars and 38 bags of chips. If each candy bar sold for \$0.75, then what is the cost of a bag of chips?

- A) \$0.45 B) \$0.55 C) \$0.60 D) \$0.75 E) None of these Answers

What is the reciprocal of eight and one-third?

- A) $-8 \frac{1}{3}$ B) 8.3 C) $-8.\bar{3}$ D) 0.12 E) None of these Answers

Simplify: $5 - 4^2 \div 2^3 + 8(3 \times 5 - 2^2 \times 3)$

- A) 27 B) $262 \frac{5}{8}$ C) 267 D) $-22 \frac{11}{16}$ E) None of these Answer

Add: $0.96 + 1.03 + 0.057 + 0.49 + 0.603$

- A) 3.653 B) 0.908 C) 3.14 D) 9.08 E) None of these Answers

At a sales tax rate of $8 \frac{1}{2} \%$, what is the change received from a twenty dollar bill on purchases of \$ 2.83, \$ 8.99, \$ 1.49 and \$ 4.69?

- A) \$ 0.47 B) \$ 1.53 C) \$ 2.00 D) \$ 1.95 E) None of these Answers

What must you make on the next test to have an average of 92 if your previous test scores are 88, 86, 100, 100, 92 and 90?

- A) 100 B) 95.3 C) 92 D) 88 E) None of these Answers

$5! - (2^2 + 3^2 + 4^2 + 5^2) = \underline{\quad ? \quad}$

- A) $4! + 3! + 2!$ B) $2 \times 3 \times 11$ C) $5^2 + 6^2$ D) $(2 + 3 + 4)^2$ E) None of these Answers

12) If A equals the number of sides of an octagon and B equals the number of edges of a cube, find:

$$A^2 + 2AB + B^2$$

- A) 256 B) 324 C) 400 D) 484 E) None of these Answers

13) What is the Greatest Common Factor (GCF) of 420 and 792?

- A) 12 B) 60 C) 126 D) 36 E) None of these Answers

14) If the length of a rectangle is four times the width and the area is 256, what is the perimeter?

- A) 136 B) 80 C) 64 D) 40 E) None of these Answers

15) What is the sum of the composite numbers between 20 and 30, and the prime numbers between 10 and 20?

- A) 233 B) 201 C) 336 D) 313 E) None of these Answers

16) Twenty-three passengers are traveling on a transit bus. At the first stop, fifteen passengers got off while eighteen passengers got on. At the second bus stop, eleven passengers departed but was replaced with eight new passengers. At the third stop, twelve passengers got off while twenty-one got on. What was the percentage of increase in the number of passengers before the first stop to the number of passengers after the third stop?

- A) $39 \frac{3}{23} \%$ B) $28 \frac{1}{8} \%$ C) 139 % D) $71 \frac{7}{8} \%$ E) None of these Answers

17) What is one-sixth of 678?

- A) 4068 B) $42 \frac{3}{8} \%$ C) 226 D) 113 E) None of these Answers

18) Which of these is equal to the product of the remainders of 273 divided by 29 and 531 divided by 16?

- A) $2^3 \times 3^2$ B) 27 C) 2×4^2 D) $2^2 \times 3^2$ E) None of these Answers

19) The ratio of two numbers is 3 to 5 and their sum is 32. What is the product of the two numbers?

- A) 15 B) 60 C) 135 D) 240 E) None of these Answers

20) If the letters of the alphabet are numbered; A = 1; B = 2; C = 3; ... Z = 26; then add the following:

$$M + A + T + H + T + E + A + M$$

- A) 81 B) 79 C) 86 D) 75 E) None of these Answers

21) What percent of prime numbers less than thirty that are also less than 10?

- A) $42 \frac{6}{7} \%$ B) $33 \frac{1}{3} \%$ C) 25 % D) 40 % E) None of these Answers

22) Simplify: $100 - 15 + 91 - 16 + 82 - 17 + 73 - 18$

A) 268

B) 280

C) 276

D) 274

E) None of these Answers

23) How many cubes measuring two inches on each edge can be placed in a box that measures three feet by 1.5 feet by $\frac{5}{6}$ feet?

A) 480

B) 750

C) 810

D) 900

E) None of these Answers

24) What is the quotient of 3.5316 divided by 3.27?

A) 0.8976

B) 8.976

C) 1.08

D) 0.0108

E) None of these Answers

25) $\sqrt{196} + \sqrt{324} + \sqrt{121} = \underline{\quad?}$

A) $2^4 + 2^4 + 2^3 + 2^3$

B) $2^4 + 2^4 + 2^3 + 2 + 2^0$

C) $4^3 + 4^2 + 4^1 + 4^0$

D) $2^5 - 2^4 + 2^3 + 2^2$

E) None of these Answers

Tie Breakers:

TB1)

$$3! \times 4! = \underline{\quad?}$$

TB2)

Find $\frac{3}{4}$ of $\frac{3}{4}$ of 256.

TB3)

In how many ways can the letters in the word ARMADILLO be arranged?

Make sure before you leave the testing room that you give your Answer Sheet to the Testing Monitor. You may keep this test and the scratch paper. Answers to the test will be posted in the Lobby of the Gym.