

SCRANTON PREPARATORY SCHOOL
ENTRANCE EXAMINATION
ARITHMETIC

Time: 60 Minutes

December 1, 2001

DIRECTIONS: Do all problems in order in the blue examination book. Please be neat. Do not do more than four problems on each page of the blue examination book. Do not change fractions to decimals or decimals to fractions in problems one to fourteen inclusive. Calculators may not be used. Place your final answer in its simplest form in the proper blank on the answer sheet. Since you will be given credit for answers only, you should be very careful when placing your final answer on the answer sheet. In the word problems, make sure you answer the question that is asked.

1. Add: $247 + .046 + 8.5 + .27$

2. Add: $7\frac{2}{3} + \frac{5}{8} + 3 + 4\frac{5}{6}$

3. Subtract 135.47 from 246.2

4. Subtract .372 from 24

5. Subtract $12\frac{2}{5}$ from 32.

6. Subtract $8\frac{5}{7}$ from $11\frac{1}{3}$

7. Multiply 1.479 by .0603

8. Multiply $3\frac{1}{5}$ by $\frac{4}{15}$
9. Multiply $3\frac{3}{7}$ by $3\frac{1}{9}$
10. Divide .912 by 32
11. Divide 12.4424 by .206
12. Divide 4 by .125
13. Divide $1\frac{5}{9}$ by $5\frac{5}{6}$
14. Divide $\frac{2}{3}$ by $4\frac{1}{6}$
15. 21 is what percent of 175?
16. Find 45 percent of 124.
17. 24 is 16 percent of what number?
18. If $\mathbf{a} \otimes \mathbf{b}$ is defined as $(\frac{2}{a} + \frac{b}{4}) \bullet \mathbf{a}$, evaluate $\frac{1}{2} \otimes 24$.

19. Two hundred gallons of fuel oil are purchased at \$1.20 per gallon and are consumed at a rate of \$.80 worth of fuel per hour. At this rate, how many hours are required to consume 200 gallons of fuel oil?
20. A certain number, N , is divided by 6. The number 22 is added to that quotient and that sum is then multiplied by 2. If that product is equal to 60, what is the value of N ?
21. If 2 shreks equal 18 plugs and one dweeb equals 8 shreks, how many plugs are there in 2 dweebs?
22. On three sales, John has received commissions of \$240, \$80, and \$110 and he has one additional sale pending. If John is to receive an average commission of exactly \$150 on the four sales, find the fourth commission.
23. Sixty of the employees of G & M Sports Entertainment Inc. belong to a golf league and 40 employees belong to a bowling league. Twenty-six employees from these two leagues belong to one and only one of these leagues but not both. How many belong to both?
24. Running at the same constant rate, six identical machines can produce a total of 270 bottles per minute. At this rate, how many bottles could ten such machines produce in four minutes?
25. A furniture store sells only two models of desks, model A and model B . The selling price of model A is \$120, which is 30% of the selling price of model B . If the furniture store sells 2000 desks, $\frac{3}{4}$ of which are model B , what is the furniture store's total revenue from the sale of desks?

ARITHMETIC ANSWER SHEET

DECEMBER 1, 2001

1. 255.816
2. $16\frac{1}{8}$; $\frac{129}{8}$
3. 110.73
4. 23.628
5. $19\frac{3}{5}$; $\frac{98}{5}$
6. $2\frac{13}{21}$; $\frac{55}{21}$
7. .0891837
8. $\frac{64}{75}$
9. $10\frac{2}{3}$; $\frac{32}{3}$
10. .0285
11. 60.4
12. 32
13. $\frac{4}{15}$
14. $\frac{4}{25}$
15. 12 ; 12% ; 12 percent
16. 55.8
17. 150
18. 5
19. 300
20. 48
21. 144
22. \$170
23. 37
24. 1800
25. \$660,000

EXAMINATION NUMBER _____

ARITHMETIC SCORE _____