

# SCRANTON PREPARATORY SCHOOL ENTRANCE EXAMINATION ARITHMETIC

Time: 60 Minutes

December 4, 2004

**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:  $6.42 + 0.537 + 124 + 32.7 + 574.016$

2. Add:  $\frac{15}{16} + 12 + 3\frac{5}{8} + 11\frac{2}{3}$

3. Subtract 87.58 from 426.23

4. Subtract 0.234 from 265

5. Subtract  $6\frac{5}{6}$  from  $9\frac{5}{8}$

6. Subtract  $33\frac{9}{13}$  from 37

7. Multiply 472.8 by 2.01

8. Multiply 83.4 by 0.00072

9. Multiply  $\frac{2}{7}$  by  $14\frac{1}{3}$

10. Multiply  $3\frac{1}{5}$  by  $2\frac{1}{12}$

11. Divide .4284 by 1.26

12. Divide 105 by .25

13. Divide  $7\frac{4}{5}$  by  $1\frac{3}{10}$

14. Divide 9 by  $7\frac{1}{5}$

15. Find 2 percent of 175.

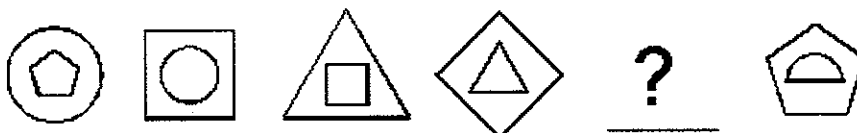
16. 378 is what percent of 840?

17. 220 is 80 percent of what number?

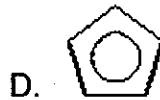
18. If  $m*n$  is defined as  $\frac{2m+n}{n^2 - \frac{1}{3}m}$ , evaluate  $12*4$

19. When the quotient of a number and 6 is subtracted from 51, and that difference is multiplied by 5, the result is 240. Find the number.

20. A Scranton hotel has 840 rooms. Forty percent of the rooms are one-bedroom suites and the remainder are two-bedroom suites. Friday, 150 of the one-bedroom suites were occupied and the hotel was 75 percent full. How many two-bedroom suites were occupied on Friday?
21. Mr. Burke rented a car from Cross-country Car Rental. He paid \$60 for the first day's rental and \$15 for each additional day. If Mr. Burke's total charges were \$225.00, for how many days did he rent the car?
22. A truck has a full tank of gas. It uses  $\frac{1}{3}$  of the gas on the first part of a journey, 10 gallons on the second part of a journey, and 9 gallons on the third part of a journey. There are 13 gallons left in the tank at the end. How many gallons does a full tank hold?
23. During a bike-a-thon a local company pledges to donate \$1.25 per mile for every \$4.00 per mile pledged by the public. If the public pledges a total of \$156.00, how much will the company donate to the bike-a-thon?
24. A supplier to McGrath's Hardware Store delivers 252 pounds of nails. The owner divides them into 5-pound bags and 2-pound bags. If he fills the same number of 5-pound bags and 2-pound bags, how many bags of nails did he fill?
25. Use the pattern sequence below to answer the question that follows.



What is the missing design in the sequence?



Arithmetic Answer Sheet

1. 737.673

2.  $28\frac{11}{48}$  ;  $\frac{1355}{48}$

3. 338.65

4. 264.766

5.  $2\frac{19}{24}$  ;  $\frac{67}{24}$

6.  $3\frac{4}{13}$  ;  $\frac{43}{13}$

7. 950.328

8. .060048

9.  $4\frac{2}{21}$  ;  $\frac{86}{21}$

10.  $6\frac{2}{3}$  ;  $\frac{20}{3}$

11. .34

12. 420

13. 6

14.  $1\frac{1}{4}$  ;  $\frac{5}{4}$

15. 3.5 ;  $3\frac{1}{2}$  ;  $\frac{7}{2}$

16. 45 ; 45% ; 45 percent

17. 275

18.  $2\frac{1}{3}$  ;  $\frac{7}{3}$

19. 18

20. 480 ; 480 rooms

21. 12 ; 12 days

22. 48 ; 48 gallons

23. \$48.75

24. 72 ; 72 bags

25. A

EXAMINATION NUMBER \_\_\_\_\_

ARITHMETIC SCORE \_\_\_\_\_