

SCRANTON PREPARATORY SCHOOL
ENTRANCE EXAMINATION
ARITHMETIC

Time: 60 Minutes

December 7, 2002

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: $603.7 + 4.58 + 41 + .063$

2. Add: $2\frac{3}{4} + \frac{5}{9} + 7 + 3\frac{11}{12}$

3. Subtract 39.65 from 62.23

4. Subtract .593 from 308

5. Subtract $6\frac{2}{5}$ from 11

6. Subtract $12\frac{4}{5}$ from $19\frac{1}{6}$

7. Multiply 25.06 by .00047

8. Multiply 12.63 by 40.2
9. Multiply $8\frac{5}{9}$ by $\frac{3}{11}$
10. Divide 106.513 by 2.53
11. Divide 320 by .04
12. Divide .1113 by 21
13. Divide $2\frac{2}{9}$ by $8\frac{1}{3}$
14. Divide $1\frac{1}{8}$ by $1\frac{4}{7}$
15. Find 23 percent of 45.
16. 48 is 3 percent of what number?
17. 480 is what percent of 600 ?
18. If $\mathbf{c} \otimes \mathbf{d}$ is defined as $\frac{\mathbf{c} + \mathbf{d}}{\mathbf{c}} + \frac{\mathbf{d} + \mathbf{c}}{\mathbf{d}}$, evaluate $5 \otimes 6$.

19. There are four major golf tournaments in professional golf: the Masters Golf Tournament, the U.S. Open, the British Open, and the PGA Championship. If Tiger Woods hit 800 practice balls in preparation for the Masters, 650 balls in preparation for the U.S. Open, and 700 balls in preparation for the British Open, how many balls would he have hit in preparation for the PGA Championship if Tiger's average for practice balls hit for all four major tournaments was 850 balls?
20. A certain number, N , is divided by 6 and that quotient is increased by 10. If that number is then multiplied by 7, the result is 490. What is the value of N ?
21. A family uses $1\frac{1}{3}$ dozen eggs every 3 days. If $1\frac{1}{3}$ dozen eggs cost \$2.50, how much does the family pay for eggs for 27 days?
22. As an incentive to get his son to do his arithmetic homework, a father offered to pay him 10 cents for every problem done correctly but to fine him 6 cents for every problem done incorrectly. When the father corrected the 24 problems, neither owed any money to the other. How many problems did the boy solve correctly?
23. Three dozen 10-gallon cans of cleaning solution weigh 2700 pounds when full. Each can when empty weighs 5 pounds. What is the weight of one gallon of cleaning solution?
24. At 7 P.M., $\frac{1}{8}$ of the eighth grade class had arrived at a school dance. By 8 P.M., 27 more eighth graders had arrived bringing the total to $\frac{1}{2}$ of the eighth grade class. How many students are in the eighth grade?
25. In a trivia contest sponsored by a local restaurant, the judges decided to award two first-place winners and two second-place winners. \$360 in prize money was divided so that each first-place winner would receive three times as much money as each second-place winner. How much did each second-place winner receive?

Arithmetic Answer Sheet

1. 649.343

2. $14\frac{2}{9}$; $\frac{128}{9}$

3. 27.58

4. 307.407

5. $4\frac{3}{5}$; $\frac{23}{5}$

6. $6\frac{11}{30}$; $\frac{191}{30}$

7. .0117782

8. 507.726

9. $2\frac{1}{3}$; $\frac{7}{3}$

10. 42.1

11. 8000

12. .0053

13. $\frac{4}{15}$

14. $\frac{63}{88}$

15. 10.35

16. 1600

17. 80% ; 80 ; 80 percent

18. $4\frac{1}{30}$; $\frac{121}{30}$

19. 1250 ; 1250 balls

20. 360

EXAMINATION NUMBER _____

21. \$22.50 ; 22.50

22. 9 ; 9 problems

23. 7 ; 7 pounds

ARITHMETIC SCORE _____

24. 72 ; 72 students

25. \$45 ; 45 ; 45 dollars