Chapter Six Práctice Set Answer Sheet

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SAT: Ratios & Rates

Name: Date.

PRACTICE SET

Basic

- 1. A subway car passes 3 stations every 10 minutes. At this rate, how many stations will it pass in 1 hour?
 - (A) 2
 - **(B)** 12
 - (C) 15
 - (D) 18
 - (E) 30
- 2. On a certain street map, $\frac{3}{4}$ inch represents one mile. What distance, in miles, is represented by $1\frac{3}{4}$
 - inches?
 - (A) $i\frac{1}{2}$ (B) $1\frac{3}{4}$
 - (C) $2\frac{1}{3}$ (D) $2\frac{1}{2}$ (E) $5\frac{1}{4}$
- The Greenpoint factory produced 2/5 of the Consolidated Brick Company's bricks in 1991. If the Greenpoint factory produced 1,400 tons of bricks in 1991, what was the Consolidated Brick Company's total output that year, in tons?
 - (A) 700
 - (B) 2,100
 - (C) 2,800
 - (D) 3,500
 - (E) 7,000

4. The ratio of $3\frac{1}{4}$ to $5\frac{1}{4}$ is equivalent to the ratio of

- (A) 3 to 5
- (B) 13 to 21
- (C) 5 to 7
- (D) 7 to 5
- (E) 5 to 3

5. If a car travels $\frac{1}{100}$ of a kilometer each second, how many kilometers does it travel per hour?

- (A) $\frac{3}{5}$ (B) $3\frac{3}{5}$ (C) 36
- (D) 72
- (E) 100
- 6. Fred can vacuum 144 square feet of carpet in 5 minutes. At this rate, how long would it take him to vacuum 2,880 square feet of carpet?
 - (A) 20 minutes
 - (B) 40 minutes
 - (C) 50 minutes
 - (D) 100 minutes
 - (E) 140 minutes
- 7. A printing press produces 4,440 posters per hour. At this rate, in how many minutes can the printing press produce 370 posters?
 - (A) 0.12
 - **(B)** 5
 - (C) 12
 - (D) 50
- (E) 720

- 8. A certain box contains baseballs and golf balls. If the ratio of baseballs to golf balls is 2:3, and there are 30 baseballs in the box, how many golf balls are in the box?
 - (A) 15
 - **(B)** 18
 - (C) 20
 - (D) 36
 - (E) 45
- 9. After spending $\frac{5}{12}$ of his salary, a man has \$140 left. What is his salary, in dollars?

Medium

- 10. At garage A, it costs \$8.75 to park a car for the first hour and \$1.25 for each additional hour. At garage B, it costs \$5.50 for the first hour and \$2.50 for each additional hour. What is the difference between the cost of parking a car for 5 hours at garage A and parking it for the same length of time at garage B ?
 - (A) \$1.50
 - (B) \$1.75
 - (C) \$2.25
 - (D) \$2.75
 - (E) \$3.25
- 11. If a kilogram is equal to approximately 2.2 pounds, which of the following is the best approximation of the number of kilograms in 1 pound?
 - (A) $\frac{11}{5}$
 - (B) $\frac{5}{8}$
 - (C) $\frac{5}{11}$ (D) $\frac{1}{3}$ (E) $\frac{1}{5}$

- 12. If the ratio of boys to girls in a class is 5 to 3, which of the following could not be the number of students in the class?
 - (A) 32
 - (B) 36
 - (C) 40
 - (D) 48
 - (E) 56
- 13. If a tree grew 5 feet in n years, what was the average rate, in inches per year, at which the tree grew during those years?
 - (A) 60n
 - (B) $\frac{5}{n}$
 - (C) $\frac{5}{12n}$
 - (D) $\frac{12n}{5}$
 - 5
 - (E) $\frac{60}{n}$
- 14. If a man earns \$200 for his first 40 hours of work in a week and then is paid $1\frac{1}{2}$ times his regular hourly rate for any additional hours, how many hours must he work to make \$230 in a week?
 - (A) 4
 - (B) 5
 - (C) 6
 - (D) 44
 - (E) 45

- 15. In a certain class, 3 out of 24 students are in student organizations. What is the ratio of students in student organizations to students not in student organizations?
 - (A) $\frac{1}{8}$ (B) $\frac{1}{7}$ (C) $\frac{1}{6}$ (D) $\frac{1}{5}$ (E) $\frac{1}{4}$

16. A student's grade in a course is determined by 4 quizzes and 1 exam. If the exam counts twice as much as each of the quizzes, what fraction of the final grade is determined by the exam?

- (A) $\frac{1}{6}$ (B) $\frac{1}{5}$
- (C) $\frac{1}{4}$ (D) $\frac{1}{3}$ (E) $\frac{1}{2}$
- 17. The cost of 4 sweatshirts is *n* dollars. At this rate, what is the cost, in dollars, of 40 sweatshirts?
 - (A) $\frac{10n}{4}$
 - (B) $\frac{n}{40}$
 - (C) <u>40</u>
 - (D) 10n
 - (E) 40*n*

- 18. If 1 "triminute" is equivalent to 3 minutes, how many triminutes are equivalent to 2.5 hours?
 - (A) 50
 - (B) 150
 - (C) 250
 - (D) 300
 - (E) 450
- 19. In a local election, votes were cast for Mr. Dyer, Ms. Frau, and Mr. Borak in the ratio of 4:3:2. If there were no other candidates and none of the 1,800 voters cast more than one vote, how many votes did Ms. Frau receive?
- 20. Ms. Smith recently drove a total of 700 miles on a business trip. If her car averaged 35 miles per gallon of gasoline and gasoline cost \$1.25 per gallon, what was the cost in dollars of the gasoline for the trip?
- 21. If cement, gravel, and sand are to be mixed in the ratio of 3:5:7 respectively, and 5 tons of cement are available, how many tons of the mixture can be made? (Assume that enough gravel and sand are available to use all the available cement.)

Hard

22. A student finishes the first half of an exam in $\frac{2}{3}$ of the time it takes him to finish the second half. If the entire exam takes him an hour, how many minutes does he spend on the first half of the

exam?

- (A) 20(B) 24
- (C) 27
- (D) 36
- (E) 40