

PRACTICE TEST B

Answer Sheet

Directions: For each question, darken the oval that corresponds to your answer choice. Mark only one oval for each question. If you change your mind, erase your answer completely.

Section 1

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|--------------|---------------|---------------|---------------|
| 1. A B C D E | 8. A B C D E | 15. A B C D E | 22. A B C D E |
| 2. A B C D E | 9. A B C D E | 16. A B C D E | 23. A B C D E |
| 3. A B C D E | 10. A B C D E | 17. A B C D E | 24. A B C D E |
| 4. A B C D E | 11. A B C D E | 18. A B C D E | 25. A B C D E |
| 5. A B C D E | 12. A B C D E | 19. A B C D E | |
| 6. A B C D E | 13. A B C D E | 20. A B C D E | |
| 7. A B C D E | 14. A B C D E | 21. A B C D E | |

Section 2

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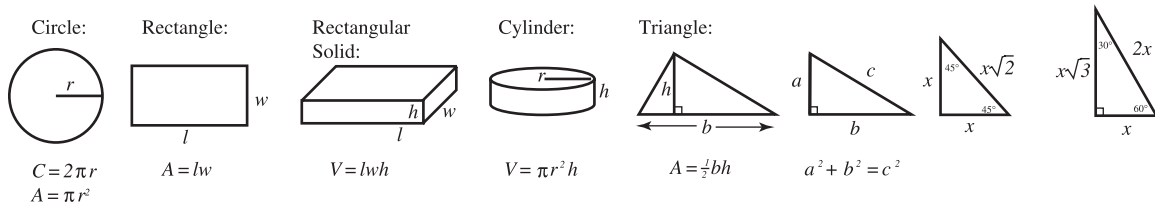
Note: Only the answers entered on the grid are scored. Handwritten answers at the top of the column are *not* scored.

PRACTICE TEST B

Section 1

25 Questions

Time: 30 Minutes



The number of degrees of arc in a circle is 360.
The measure in degrees of a straight angle is 180.
The sum of the measures in degrees of the angles of a triangle is 180.

- A musical instrument depreciates by 20% of its value each year. What is the value, after 2 years, of a piano purchased new for \$1200?
 - \$768
 - \$912
 - \$675
 - \$48
 - \$1152
- Which of the following has the largest numerical value?
 - $\frac{3}{5}$
 - $\left(\frac{2}{3}\right)\left(\frac{3}{4}\right)$
 - $\sqrt{25}$
 - $(.9)^2$
 - $\frac{2}{.3}$
- $\frac{1}{4}\%$ written as a decimal is
 - 25
 - 2.5
 - .25
 - .025
 - .0025
- Which of the following fractions is equal to $\frac{1}{4}\%$?
 - $\frac{1}{25}$
 - $\frac{4}{25}$
 - $\frac{1}{4}$
 - $\frac{1}{400}$
 - $\frac{1}{40}$
- Roger receives a basic weekly salary of \$80 plus a 5% commission on his sales. In a week in which his sales amounted to \$800, the ratio of his basic salary to his commission was
 - 2:1
 - 1:2
 - 2:3
 - 3:2
 - 3:1
- The value of $\frac{\frac{1}{2}}{\frac{1}{3} - \frac{1}{4}}$ is
 - 6
 - $\frac{1}{6}$
 - 1
 - 3
 - $\frac{3}{2}$

7. The sum of Alan's age and Bob's age is 40. The sum of Bob's age and Carl's age is 34. The sum of Alan's age and Carl's age is 42. How old is Bob?
- (A) 18
(B) 24
(C) 20
(D) 16
(E) 12
8. On a map having a scale of $\frac{1}{4}$ inch : 20 miles, how many inches should there be between towns 325 miles apart?
- (A) $4\frac{1}{16}$
(B) $16\frac{1}{4}$
(C) $81\frac{1}{4}$
(D) $32\frac{1}{2}$
(E) $6\frac{1}{4}$
9. In Simon's General Store, there are m male employees and f female employees. What part of the staff is men?
- (A) $\frac{m+f}{m}$
(B) $\frac{m+f}{f}$
(C) $\frac{m}{f}$
(D) $\frac{m}{m+f}$
(E) $\frac{f}{m}$
10. If the angles of a triangle are in the ratio 2:3:4, the triangle is
- (A) acute
(B) isosceles
(C) right
(D) equilateral
(E) obtuse
11. If the length and width of a rectangle are each multiplied by 2, then
- (A) the area and perimeter are both multiplied by 4
(B) the area is multiplied by 2 and the perimeter by 4
(C) the area is multiplied by 4 and the perimeter by 2
(D) the area and perimeter are both multiplied by 2
(E) the perimeter is multiplied by 4 and the area by 8
12. Paul needs m minutes to mow the lawn. After he works for k minutes, what part of the lawn is still unmowed?
- (A) $\frac{k}{m}$
(B) $\frac{m}{k}$
(C) $\frac{m-k}{k}$
(D) $\frac{m-k}{m}$
(E) $\frac{k-m}{m}$
13. Mr. Marcus earns \$250 per week. If he spends 20% of his income for rent, 25% for food, and 10% for savings, how much is left each week for other expenses?
- (A) \$112.50
(B) \$125
(C) \$137.50
(D) \$132.50
(E) \$140
14. What is the area of the shaded portion if the perimeter of the square is 32? (The four circles are tangent to each other and the square, and are congruent.)



- (A) $32 - 16\pi$
(B) $64 - 16\pi$
(C) $64 - 64\pi$
(D) $64 - 8\pi$
(E) $32 - 4\pi$

15. How far is the point $(-3, -4)$ from the origin?

- (A) 2
 (B) 2.5
 (C) $4\sqrt{2}$
 (D) $4\sqrt{3}$
 (E) 5

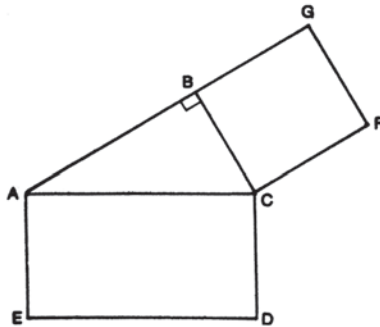
16. The product of 3456 and 789 is exactly

- (A) 2726787
 (B) 2726785
 (C) 2726781
 (D) 2726784
 (E) 2726786

17. Susan got up one morning at 7:42 A.M. and went to bed that evening at 10:10 P.M. How much time elapsed between her getting up and going to bed that day?

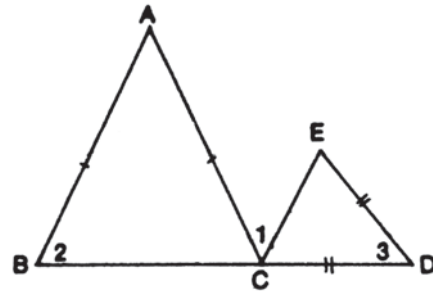
- (A) 18 hrs. 2 min.
 (B) 14 hrs. 18 min.
 (C) 15 hrs. 18 min.
 (D) 9 hrs. 22 min.
 (E) 14 hrs. 28 min.

18. Find the perimeter of right triangle ABC if the area of square $AEDC$ is 100 and the area of square $BCFG$ is 36.



- (A) 22
 (B) 24
 (C) $16+6\sqrt{3}$
 (D) $16+6\sqrt{2}$
 (E) cannot be determined from information given

19. Find the number of degrees in angle 1 if $AB = AC$, $DE = DC$, angle 2 = 40° , and angle 3 = 80° .



- (A) 60
 (B) 40
 (C) 90
 (D) 50
 (E) 80

20. If p pencils cost $2D$ dollars, how many pencils can be bought for c cents?

- (A) $\frac{pc}{2D}$
 (B) $\frac{pc}{200D}$
 (C) $\frac{50pc}{D}$
 (D) $\frac{2Dp}{c}$
 (E) $200pcD$

21. Two trains start from the same station at 10 A.M., one traveling east at 60 m.p.h. and the other west at 70 m.p.h. At what time will they be 455 miles apart?

- (A) 3:30 P.M.
 (B) 12:30 P.M.
 (C) 1:30 P.M.
 (D) 1 P.M.
 (E) 2 P.M.

22. If $x < 0$ and $y < 0$, then

- (A) $x + y > 0$
 (B) $x = -y$
 (C) $x > y$
 (D) $xy > 0$
 (E) $xy < 0$

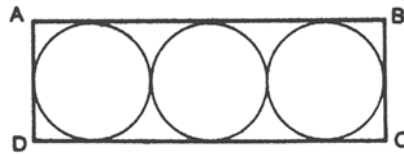
23. Which of the following is the product of 4327 and 546?

- (A) 2362541
 (B) 2362542
 (C) 2362543
 (D) 2362546
 (E) 2362548

24. If a classroom contains 20 to 24 students and each corridor contains 8 to 10 classrooms, what is the minimum number of students on one corridor at a given time, if all classrooms are occupied?

- (A) 200
- (B) 192
- (C) 160
- (D) 240
- (E) 210

25. If the area of each circle enclosed in rectangle $ABCD$ is 9π , the area of $ABCD$ is



- (A) 108
- (B) 27
- (C) 54
- (D) 54π
- (E) 108π

Section 2

25 Questions

Time: 30 Minutes

Directions: Solve each of the following problems. Write the answer in the corresponding grid on the answer sheet and fill in the ovals beneath each answer you write. Here are some examples

Answer: $3/4$ ($-.75$; show answer either way)

Answer : 325

	3	/	4
	1	●	
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1	1	1	1
2	2	2	2
3	●	3	3
4	4	4	●
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

	.	7	5
	1	1	
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1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	●
6	6	6	6
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8	8	8	8
9	9	9	9

3	2	5	
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1	1	1	1
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3	3	3	3
4	4	4	4
5	5	●	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

	3	2	5
	1	1	
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1	1	1	1
2	2	●	2
3	3	3	3
4	4	4	4
5	5	5	●
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

Note: A mixed number such as $3 \frac{1}{2}$ must be gridded as $7/2$ or as 3.5 . If gridded as “ $3 \frac{1}{2}$,” it will be read as “thirty-one halves.”

Note: Either position is correct.

- Simplified as a fraction to simplest form, what part of a dime is a quarter?
- Marion is paid \$24 for 5 hours of work in the school office. Janet works 3 hours and makes \$10.95. How much more per hour does Marion make than Janet?
- If the outer diameter of a cylindrical oil tank is 54.28 inches and the inner diameter is 48.7 inches, what is the thickness of the wall of the tank, in inches?
- What number added to 40% of itself is equal to 84?
- If $r = 25 - s$, what is the value of $4r + 4s$?
- A plane flies over Denver at 11:20 A.M. It passes over Coolidge, 120 miles from Denver, at 11:32 A.M. Find the rate of the plane in miles per hour.
- 53% of the 1000 students at Jackson High are girls. How many boys are there in the school?
- How many digits are there in the square root of a perfect square of 12 digits?
- In May, Carter's Appliances sold 40 washing machines. In June, because of a special promotion, the store sold 80 washing machines. What is the percent of increase in the number of washing machines sold?
- Find the value of $(3\sqrt{2})^2$.