

SECTION 2 40 Questions

In this section solve each problem, using any available space on the page for scratchwork. Then decide which is the best of the choices given and fill in the corresponding oval on the answer sheet.

The following information is for your reference in solving some of the problems.

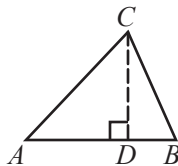
Circle of radius r : Area = πr^2 ; Circumference = $2\pi r$

The number of degrees of arc in a circle is 360.

The measure in degrees of a straight angle is 180.

Definition of symbols:

= is equal to \leq is less than or equal to
 \neq is unequal to \geq is greater than or equal to
 $<$ is less than \parallel is parallel to
 $>$ is greater than \perp is perpendicular to



Triangle: The sum of the measures in degrees of the angles of a triangle is 180.

If $\angle CDA$ is a right angle, then

$$(1) \text{ area of } \triangle ABC = \frac{AB \times CD}{2}$$

$$(2) AC^2 = AD^2 + DC^2$$

Note: Figures that accompany problems in this test are intended to provide information useful in solving the problems. They are drawn as accurately as possible EXCEPT when it is stated in a specific problem that its figure is not drawn to scale. All figures lie in a plane unless otherwise indicated. All numbers used are real numbers.

41. If $\frac{3}{9} = \frac{3}{x+2}$, what is the value of x ?

(A) $-\frac{5}{9}$ (B) 7 (C) 3 (D) $\frac{7}{3}$ (E) $\frac{25}{3}$

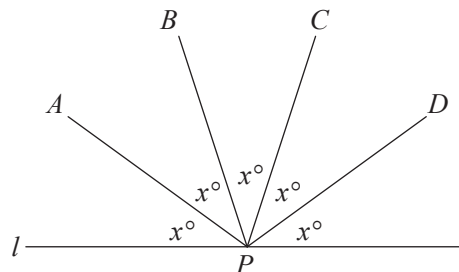
42. In the xy -coordinate plane, the coordinates of three vertices of a rectangle are (1, 5), (5, 2), and (5, 5). What are the coordinates of the fourth vertex of the rectangle?

(A) (5, 7)
 (B) (2, 5)
 (C) (2, 1)
 (D) (1, 7)
 (E) (1, 2)

80, 80, 84, 85, 88, 92, 97, 98

43. The average (arithmetic mean) of the 8 numbers listed above is 88. Of the following, which pair of numbers could be removed from the list without changing the average?

(A) 80 and 97
 (B) 84 and 92
 (C) 80 and 98
 (D) 85 and 92
 (E) 84 and 97



44. In the figure above point P is on line l . What is the value of x ?

(A) 15 (B) 36 (C) 35 (D) 30 (E) 26

$$\frac{4K8}{3} = m$$

45. In the equation above, K is a digit in the three-digit number $4K8$, and m is a positive integer. Which of the following could be the digit K ?

(A) 1 (B) 7 (C) 5 (D) 4 (E) 3

46. Francis bought a stereo for x dollars and sold it at a 3 percent profit. Which of the following gives the amount of Francis' profit?

(A) $\$0.03x$
 (B) $\$0.07x$
 (C) $\$0.30x$
 (D) $\$0.70x$
 (E) $\$0.97x$

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