SAT SUBJECT - MATH LEVEL II

- Question 1: If the value of tan(-2a) is 2, what is the value of tan(2a)?

  (a) -2

  (b) 2

  (c) -4

  (d) 4

  (e) 3

- Question #2: What is sec(a)sin(a) + csc(a)cos(a) , if a = 45^{o}?

  (a) 2

  (b) 1

  (c) 1/2

  (d) -1/2

  (e) ¶/2

- Question #3: What is $\sin^2(a)\cdot\cos^2(a)\cdot[1 + \tan^2(a)]$?

  (a) $\tan^2(a)$

  (b) $\cos^2(a)$

  (c) $\sin^2(a)$

  (d) $\sec^2(a)$

  (e) $\csc^2(a)$

- Question #4: What are the polar coordinates of the point with (-5, 5) rectangular coordinates?

  (a) $(5\sqrt{2}, 45^{o})$

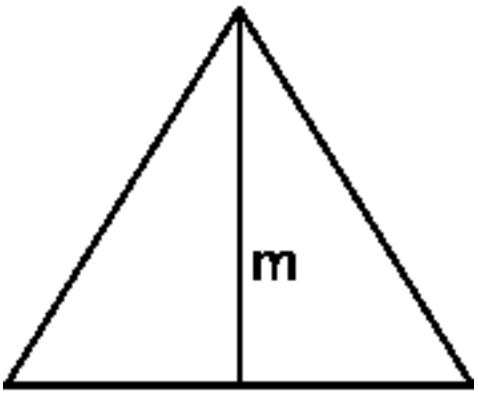
  (b) $(5, 45^{o})$

  (c) $(5, 135^{o})$

  (d) $(5\sqrt{2}, 135^{o})$

  (e) $(-5, 135^{o})$

- Question #5: What is the volume of the geometric solid produced by the equilateral triangle in the figure below when it is rotated 360^{o} about the altitude m?



  (a) $\P m^3/9$

  (b) $\P m^2/9$

  (c) $\P m^3/4$

  (d) $\P m^3$

  (e) $m^3/9$

- Question #6: Solve for x in the following equation: $x^2 - 10x + 10 = 0$.

  (a) -5 +/- sqrt(15)

  (b) 5 +/- sqrt(15)

  (c) 5

  (d) -5

  (d) 5 +/- sqrt(5)

- Question #7: If log(x) = 2 and log(y) = 5, what is $\log(x^2y^3)$?

  (a) 11

  (b) 15

  (c) 17

  (d) 19

  (e) 29

- Question #8: What is the greatest common factor of 17 and 81?

  (a) 1

  (b) 17

  (c) 3

  (d) 9

  (e) 27

- Question #9: In the (x,y) plane, which of the following statements are true?

  I. Line y + x = 5 is perpendicular to line y - x = 5.
  II. Lines y + x = 5 and y - x = 5 intersect each other on the y axis.
  III. Lines y + x = 5 and y - x = 5 intersect each other on the x axis.

  (a) I is the only true statement

  (b) II is the only true statement

  (c) I and II are both true

  (d) I and III are both true

  (e) II and III are both true

- Question #10: Find the domain of the function $f(x) = \sqrt{(-x)} / [(x - 2)(x + 2)]$:

  (a) $(-\infty , -2) \cup (-2 , 0)$

  (b) $(-\infty , -2) \cup (-2 , 0]$

  (c) $(-\infty , 2) \cup (2 , 0]$

  (d) $(-\infty , 2) \cup (2 , 0)$

  (e) $(-\infty , -2) \cup (-2 , 2)$

Solutions:

Question #1: a
Question #2: a
Question #3: c
Question #4: d
Question #5: b
Question #6: b
Question #7: d
Question #8: a
Question #9: c
Question #10: a