Math Level 1 SAT Practice Test 14

Q1.What is the measure of the angle made between a line segment with points (0,0), (−8,7) and the x-axis? Round your answer to the nearest hundredth of a degree. A. 48.81◦

B. No angle can be calculated
C. 71.41◦
D. 48.81◦
E. 41.10◦

Q2. Solve for θ between [0,2π].
sin(2θ)=½

A. π/12, 5π/12
B. π/3, 2π/3
C. π/6, 5π/6
D. π/6, π/3

Q3. Which of the following phrases can be represented by the algebraic expression 1/x−9?

A. The product of negative nine and the reciprocal of a number
B. Nine less than the reciprocal of a number
C. The reciprocal of the difference of a number and nine
D. The reciprocal of the product of negative nine and a number
E. Nine decreased by the reciprocal of a number

Q4. Solve for y in terms of x:
8y+3xy−6=2

A. −4/8+3x
B. 8/8+3x
C. 8/8−3x
D. −4/8−3x

Q5. Solve for x.
3x+2≥−7

A. x≥−1
B. x≥1
C. x≤−3
D. x≥3
E. x≥−3

Q6. Which of the following is a prime factor of $x^6 - 1$ **?**

A. $x^3 + 2x + 1$

B. $x^2 + 1$

C. $x^2 + x + 1$

D. $x^3 + 3x + 1$

E. $x^2 + x + 1$

Q7. Give the solution set of the inequality

$$\frac{2x - 5}{x - 7} > 0$$

A. (−∞,2,1/2) ∪ (7,∞)
B. (−∞,2,1/2)
C. (2,1/2,7)
D. (2, 1/2,7) ∪ (7,∞)
E. (−∞,2, 1/2) ∪ (2, 1/2,7) ∪ (7,∞)

Q8. Evaluate:45−35i/ 5i

A. 9−7i
B. −9−7i
C. −7+9i
D. 7−9i
E. −7−9i

Q9. Evaluate the expression

$$(3+4)^2 + (\frac{3+5}{2}) + 6 \div 2$$

A. 60
B. 56
C. 33
D. 29

Q10. Evaluate the expression:

$$\left(\frac{3*2}{6}\right)+8^2-4*6+5$$

A. 21
B. 64
C. 46
D. 366

Q11. Add in modulo 7:
5+4+6+2

A. 5
B. 2
C. 4
D. 3
E. 6

Q12. How many elements are in a set that has exactly 128 subsets?

A. 16
B. 8
C. 12
D. None of the other responses is correct.
E. 7

Q13. Define an operation $\vee$ on the set of real numbers as follows:
For any two real numbers
a,b
$a \vee b = ||a+2b|+|2a+b||$
Evaluate the expression
$4 \vee (-4)$

A. 64
B. 12
C. 0
D. 24
E. 8

Q14. Solve for x.
|2x+3|=7

A. x=−5,2
B. x=10,3
C. x=5,−2
D. x=5,2

Q15. Find the midpoint of the line that passes through the points $(-1,4)$ and $(5,2)$

A. $(-3,2)$
B. $(3,-2)$
C. $(2,-3)$
D. $(2,3)$
E. $(3,3)$

.