ثانويـة التكنولوجيـا التطبيقيـة
Applied Technology High School

SAT I	2012 / 2013

Question booklet # 6

Grade	12
Cluster	Core
Subject	Mathematics

Student Name			
Student Number		Section	

Coverage	➢ SAT me, basic reasoning questions.

1. 40% of 80 is what percent of 96

    a. 20%
    b. 30%
    c. $33\frac{1}{3}\%$
    d. 50%
    e. $66\frac{2}{3}\%$

2. The point (14, 14) is the center of the circle, and (2, 9) is a point on the circle what is the length of the diameter of the circle?
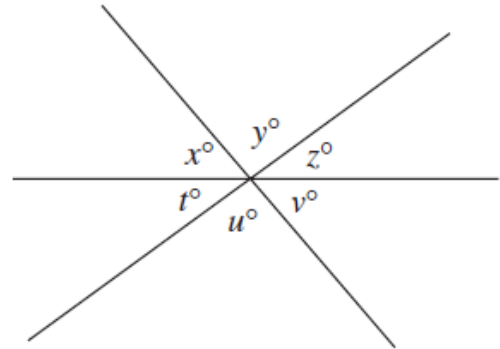   a. 24
    b. 26
    c. 50
    d. 144π
    e. 169π

3. If $w^5 \times w^a = w^{15}$ and $(w^4)^b = w^{12}$
    What is the value of a + b?
    a. 6
    b. 7
    c. 11
    d. 12
    e. 13

4.

In the figure above three lines intersect at a point , if x = 71 and u = 64 what is the value of z

    a. 40
    b. 45
    c. 50
    d. 55
    e. 60

5. Twenty students in a chemistry class took a test on which the overall average score was 75. If the average score for 12 of those students was 83, what was the average score for the remaining members of the class?

    a. 60
    b. 61
    c. 62
    d. 63
    e. 64

6. If the sum of two numbers is 4 and their difference is two what is their product

    a. 2
    b. 3
    c. 4
    d. 6
    e. 8

7. If 2 x + 3 y = 17 and 4 x − 5y = 12 what is the value of 6 x − 2y?

    a. 5
    b. 8
    c. 25
    d. 27
    e. 29

8. Let ∇x be defined by the equation
    $\nabla x = 3 x - 3$
    Which of the following is equivalent to?
    $$\frac{\nabla 7}{\nabla 3}$$

    a. $\nabla 2$
    b. $\nabla 3$
    c. $\nabla 6$
    d. $\nabla 8$
    e. $\nabla 9$

9. If $a^2 + b^2 = 4$ and ab = 5 what is the value of $(a+b)^2$?
    a. 10
    b. 12
    c. 14
    d. 16

10. If $3\sqrt{x} - 7 = 20$, what is the value of x
    a. 3
    b. 9
    c. 27
    d. 36
    e. 81

11. If the average of 3 , 7 , 10 and x is 7 what is the median of 3 , 7 , 10 and x
    a. 5.5
    b. 6
    c. 6.5
    d. 7
    e. 7.5

12. If the function f is defined by
    $$f(x) = \frac{2x - 4}{3}$$, for what value of x does
    $f(x) = 18$?
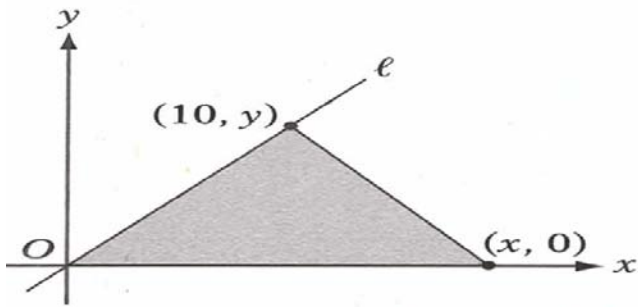   a. 26
    b. 27
    c. 28
    d. 29
    e. 30

13. A machine can produce 50 computer chips in two hours . At this rate how many computer chips can the machine produce in 7 hours
    a. 175
    b. 200
    c. 225
    d. 250

14.A square has the same area of a right

   triangle with sides of lengths 6 , 8 , 10

   What is the length of one side of a square

  a. 4

  b. $2\sqrt{3}$

  c. $\sqrt{15}$

  d. $2\sqrt{6}$
  e. 12

15.

In the figure above

The slope of line L is $\dfrac{3}{5}$, and the area

of the triangle is 48 square units what is

the value of x + y ?

  a. 13

  b. 14

  c. 19
  d. 22
  e. 96

End of Practice sheet six