ثانويــة التكنولوجيــا التطبيقيــة
Applied Technology High School

SAT I	2012 / 2013

Question booklet # 1

Grade	11
Cluster	**Core**
Subject	**Mathematics**

Student Name			
Student Number		**Section**	

Coverage	➢ SAT I, basic reasoning questions.

1. Two of three angles of a triangle measure $35°$ and $65°$, respectively. What is the measure, in degrees, of the third angle of the triangle?

    a. $65°$
    b. $35°$
    c. $80°$
    d. $100°$
    e. $110°$

2. The sum of 16 and a number x is 5 more than double of 6, What is the value of x?
    a. 1
    b. -1
    c. 3
    d. -2
    e. 0

3. If a and b are even integers. Which of the following must be **Odd** integer?
    I. a^2b
    II. $a+b^2$
    III. $2ab$

    a. None
    b. I only
    c. II only
    d. III only
    e. I and II

a	$f(a)$	$g(a)$
1	3	-2
2	6	1
3	5	4
4	-1	5
-1	0	7

4. Let the functions f, and g be defined by the table above. If $f(1) = b$, what is the value of $g(b)$?
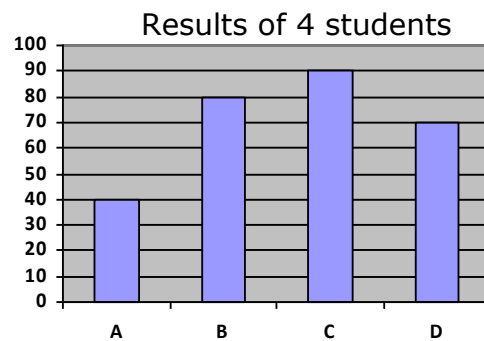   a. -2
    b. 1
    c. 4
    d. 5
    e. 7

5. If $x + 4y + 2z = x + 4y - 10$, what is the value of z ?

    a. -10
    b. -5
    c. 5
    d. 10
    e. 20

6. Mr. Hamad has $3,000 in savings account (no interest) and plans to add $100 per week to the account. Which of the following expressions represents the amount he will have, in dollars, after x weeks?
    a. $100\,x$
    b. $100 + 3{,}000x$
    c. $3{,}000 + 100x$
    d. $(3{,}000 + 100)x$
    e. $3{,}000\,x$

Results of 4 students

7. The graph above shows the scores of four students in math quiz. What is the difference between the greatest and the least scores?
    a. 10
    b. 20
    c. 30
    d. 40
    e. 50

8. If x is a positive even integer, which of the following is **NOT** an even integer?

  a. $x - 2$
  b. $x + 2$
  c. $x + 1$
  d. $x - 4$
  e. $x + 4$

$$2x + 3y = 6$$
$$3x - 3y = 9$$

9. In the solution to the system of equations above, what is the value of x?

  a. 3
  b. 4
  c. 5
  d. 6
  e. 7

---

10. What is the greatest number of sugar bags, each $\frac{2}{5}$ of Kilograms, that can be taking from 16 Kilogram bag?

  a. 30
  b. 35
  c. 40
  d. 45
  e. 50

---

11. A circle has an area of π square meters, what is the circumference of the circle?

  a. π meters
  b. 2π meters
  c. $\sqrt{\pi}$ meters
  d. π^2 meters
  e. $\frac{1}{\pi}$ meters

12. For all numbers s and t, let the operation $\square$ be define by $s \square t = 2t$ and let operation $\bullet$ be defined by $s \bullet t = 2s$. Which of the following must be true?

  a. $s \bullet t = t \bullet s$
  b. $s \square t = t \square s$
  c. $s \bullet t = s \square t$
  d. $s \bullet t = t \square s$
  e. $t \square (s \bullet t) = s \bullet (t \square s)$

---

13. If $n = -4b$, what is $5n + 2$ in term of b ?

  a. $-18b$
  b. $-22b$
  c. $-20b + 2$
  d. $-18b + 2$
  e. $-22b + 2$

---

14. Which of the following is equal to 0.555?

  a. $\frac{5}{10} + \frac{5}{100} + \frac{5}{1000}$
  b. $0.5 + 0.50 + 0.500$
  c. $\frac{555}{100}$
  d. $\frac{50}{10} + \frac{500}{100} + \frac{5000}{1000}$
  e. $0.5 + 0.55 + 0.555$

---

15. If $3t + 9 = 13$, what is the value of $9t$?

  a. 3
  b. 6
  c. 9
  d. 12
  e. 15

End of Practice sheet one