



ثانوية التكنولوجيا التطبيقية  
Applied Technology High School

**SAT I**

**2011 / 2012**

## Question booklet # 12

<b>Grade</b>	<b>12</b>
<b>Cluster</b>	<b>Core</b>
<b>Subject</b>	<b>Mathematics</b>

<b>Student Name</b>			
<b>Student Number</b>		<b>Section</b>	

<b>Coverage</b>	<ul style="list-style-type: none"> <li>➤ SAT I, basic reasoning questions.</li> </ul>
-----------------	---

1. If  $\frac{\sqrt{x}}{2} = 3\sqrt{2}$  what is the value of  $x$ ?

- a. 4
- b. 36
- c. 16
- d. 72
- e. 64

2. If  $x + y = 3$  and  $3x = 8 - 4y$  What is the value of  $3x$ ?

- a. 4
- b. 12
- c. -4
- d. 9
- e. -3

3. In the coordinate plane, what is the midpoint of the line segment with endpoints at  $(5,-2)$  and  $(1,4)$ ?

- a.  $(6,2)$
- b.  $(3,2)$
- c.  $(6,1)$
- d.  $(3,1)$
- e.  $(6,-1)$

4. Which of the following is equivalent to  $x^2 > 3x$ ?

- a.  $x > 0$
- b.  $x < 3$
- c.  $x < 0$  or  $x > 3$
- d.  $0 < x < 3$
- e.  $x > 3$

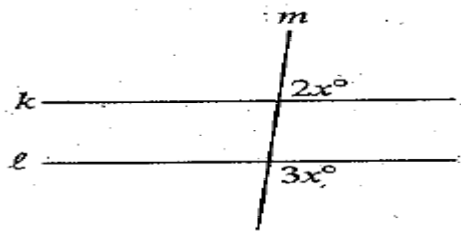
5.  $5b^2 - 30b + 45 = ?$

- a.  $5(b - 3)$
- b.  $5(b - 4)^2$
- c.  $(3 - b)^2$
- d.  $5(b - 3)^2$
- e.  $5(b + 3)^2$

6. If  $x > 0$ , then 2 percent of 5 percent of  $3x$  is what percent of  $x$ ?

- a. 0.03 %
- b. 0.3 %
- c. 0.6 %
- d. 3 %
- e. 6 %

7.



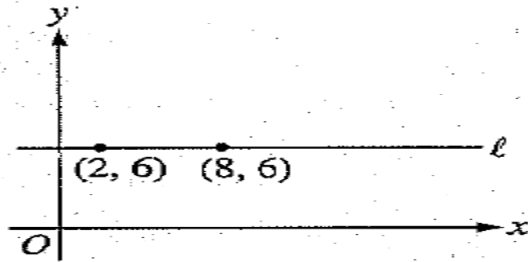
In the figure above, if  $k$  and  $l$  are parallel lines intersected by line  $m$ , what is the value of  $2x$ ?

- a. 30
- b. 45
- c. 60
- d. 72
- e. 85

- 8.** In triangle ABC,  $AB = 6$ ,  $BC = 12$  and  $AC = x$ . Which of the following cannot be a value of  $x$ ?

- a. 6
- b. 7
- c. 8
- d. 9
- e. 10

**9.**



In the figure above, line  $l$  has equation  $y = mx + b$ , where  $m$  and  $b$  are constants.

What is the value of  $b$ ?

- a. 0
  - b. 2
  - c. 4
  - d. 6
  - e. 8
- 10.** When  $x$  is divided by 5, the remainder is 4. When  $x$  is divided by 9, the remainder is 0. Which of the following is a possible value for  $x$ ?
- a. 24
  - b. 45
  - c. 59
  - d. 109
  - e. 144

- 11.** If the product of six integers is negative, then, at most, how many of the five integers could be negative?

- a. *Two*
- b. *three*
- c. *Four*
- d. *Five*
- e. *Six*

- 12.** If  $x - 1$  is a multiple of 3, which of the following must be the next greater multiple of 3?

- a.  $x$
- b.  $x + 2$
- c.  $x + 3$
- d.  $3x$
- e.  $3x - 3$

- 13.** For how many values of  $n$  where  $n$  is a positive integer less than 10 is  $\frac{n+2}{3}$  an integer?

- a. None
- b. One
- c. Three
- d. Four
- e. Five

- 14.** A machine labels 150 bottles in 20 minutes. At this rate, how many minutes does it take to label 60 bottles?

- a. 2
- b. 4
- c. 6
- d. 8
- e. 10

**End of Practice sheet Two**