

### Strand B (pattern and algebra) Test

A. Choose the most appropriate response.

1. Fine the value of 'x' from the equation,  $5 - 3x = -16$

a)  $X= 7$

b)  $X= -7$

c)  $X= 8$

d)  $X= -8$

2. Which of the following expressions represents the pattern rule for the sequence:  
3, 6, 9, 12, ...?

a)  $n+1$

b)  $2n$

c)  $3n$

d)  $14n -1$

3. What is the intersection point of the line with equation;  $y = -3x + 3$  and  $y = -5x - 1$ ?

a)  $(-2,-3)$

b)  $(2,3)$

c)  $(4,3)$

d)  $(-4,0)$

4. The slope of the line with the point,  $(4,9)$  and  $(7,15)$  is

a)  $m= 3$

b)  $m= 2$

c)  $m= 6$

d)  $m= 0$

5. The slope of the graph is said to be positive;

- If the line moves from left to right upward
- If the line moves from left to right downward
- If the line moves parallel to x- axis
- If the line moves parallel to y-axis

6. What is the slope of the line represented by the graph of the equation  $y = -\frac{1}{2}x + 4$

- $m=2$
- $m= -2$
- $m= \frac{1}{2}$
- $m= -\frac{1}{2}$

7. Complete the sequence of a pattern 2, 5, 8, 11, 14... , ...?

- 16,18
- 17,19
- 18,20
- 17,20

8. Which of the following patterns would be represented by a graph with a negative slope?

- $y= -3x + 2$
- $y = 2x + 5$
- $y = \frac{1}{2}x - 3$
- $y = \frac{1}{4}x + 6$

9. The difference between two whole numbers is 66. The ratio of the two numbers is 2: 5. The two numbers are:

- a) 60 and 6
- b) 100 and 33
- c) 110 and 44
- d) 99 and 33

10. Subtract  $(5 - 4x) - (2x - 3)$ .

- a)  $6x - 2$
- b)  $-2x - 2$
- c)  $-6x + 8$
- d)  $6x + 8$

11. The polynomial with three terms is

- a) Monomial
- b) Binomial
- c) Polynomial
- d) Trinomial

12. The pattern rule for the sequence; 15 , 8 , 1 , -6 is

- a)  $tv = 22 - 7tn$
- b)  $tv = 7tn - 22$
- c)  $tv = -7tn + 22$
- d)  $tv = 22 + 7tn$

13. Dorji is 150 km from home when he starts a trip toward home. He travels at a speed of 29 km/h. Which equation below represents the expression.

- a)  $20 = 150 - 29n$
- b)  $150 = 29n + 20$
- c)  $150n = 29 + 20$
- d)  $20n = 150 - 29$

14. The perimeter of the rectangle is 20cm. If the length of the rectangle is 6cm, then its breadth will be:

- a) 4 cm
- b) 6 cm
- c) 10 cm
- d) 14cm

15. If  $x$  is an even number, then the next even number is:

- a)  $x+1$
- b)  $x+2$
- c)  $x+3$
- d)  $x+4$