

Solution

Name: ..... Group: .....

**Exercise 1:** Write the verbs in brackets in the correct form. (4 pts).

- (1) She (study) studies..... in the library everyday.
- (2) When i was young, i (want) .... wanted.... to become an astronaut.
- (3) It (rain) was raining heavily, when i woke up this morning.
- (4) Ali (travel) will travel to Istanbul next week.

**Exercise 2:** Translate these terms to arabic. (6 pts).

- (1) Fraction: ..... كسر ..... (2) Integral:..... التكامل.....
- (3) Polynomial: ..... متعدد الحدود ..... (4) Prime number:..... عدد أولي.....
- (5) Derivative: ..... المشتق ..... (6) Addition: ..... إضافة.....
- (7) Function:..... دالة ..... (8) divisor:..... قسمة.....

**Exercise 3:** Write in letters the following statements. (6 pts)

- (1)  $\forall x \in \mathbb{R}_+; |x| = x$ . For all positive real number x, we have the absolute value of x equals x.
- (2)  $\sqrt[n]{a}$  The n-th root of a.
- (3)  $2 - 3i = 2 + 3i$  The complex conjugate of twice minus three times i equals two plus three times i.
- (4)  $\forall a, b \in \mathbb{R}; a^2 + b^2 \geq 2ab$  For all a and b real numbers, we have a squared plus b squared is greater than two times a times b.

**Exercise 4:** Write in formula form the following equations. (4 pts)

- (1) C equals L over R squared, plus omega squared times L cubed.  
 $C = \frac{L}{R^2} + \omega^2 \times L^3$
- (2) E equals lambda to the power of five.  
 $E = \lambda^5$
- (3) There exists a real number x, such that for all real number y; we have x plus y equals ten.  
 $\exists x \in \mathbb{R}, \forall y \in \mathbb{R}; x + y = 10$
- (4) For all q rational number, there exist a and b integer numbers s.t q equals a over b.  
 $\forall q \in \mathbb{Q}, \exists a, b \in \mathbb{Z}; q = \frac{a}{b}$

Good luck!