NSW Education Standards Authority

2022 **HIGHER SCHOOL CERTIFICATE EXAMINATION**

Mathematics Extension 1

General Instructions

* Reading time -- 7 minutes
* Working time -- 74 minutes
* Write using black pen
* Calculators approved by NESA may be used
* A reference sheet is provided at the back of this paper
* For questions in Section II, show relevant mathematical reasoning and/or calculations
* Write your Centre Number and Student Number on all Writing Booklets attached

Total marks:
44

Section I -- 7 marks

* Attempt Questions 1-7
* Allow about 7 minutes for this section

Section II -- 37 marks

* Attempt Questions 8-10
* Allow about 67 minutes for this section

Section I

7 marks
Attempt Questions 1--7
Allow about 7 minutes for this section

Use the multiple-choice answer sheet for Questions 1--7.

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1. For what values of n are (-n - 4, 3) and (2n + 1, -1) parallel?

(A) -3

(B) -4

(C) -5

(D) -6

2. For what values of n are (-2n + 4, 3) and (-2n - 2, 2) parallel?

(A) -1

(B) -2

(C) -5

(D) 1

3. For what values of n are (2n - 2, -2) and (-n - 4, 1) parallel?

(A) -1

(B) -3

(C) -4

(D) -6

4. For what values of n are (-4n - 2, 1) and (n + 3, -1) parallel?

(A) 2

(B) 3

(C) 5

(D) 6

5. For what values of n are (-3n + 3, 2) and (-n - 3, 1) parallel?

(A) -2

(B) -4

(C) -6

(D) -7

6. For what values of n are (-4n - 1, 1) and (n + 4, 3) parallel?

(A) 1

(B) 2

(C) 3

(D) 5

7. For what values of n are (-2n + 4, -3) and (4n + 4, -2) parallel?

(A) 2

(B) 3

(C) 4

(D) 6