NSW Education Standards Authority

2022 **HIGHER SCHOOL CERTIFICATE EXAMINATION**

Mathematics Extension 1

General Instructions

* Reading time -- 10 minutes
* Working time -- 120 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:
70

Section I -- 10 marks

* Attempt Questions 1-10
* Allow about 10 minutes for this section

Section II -- 60 marks

* Attempt Questions 11-14
* Allow about 110 minutes for this section

Section I

10 marks
Attempt Questions 1--10
Allow about 10 minutes for this section

Use the multiple-choice answer sheet for Questions 1--10.

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

(A) -2

(B) -3

(C) -4

(D) -6

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

(A) 0

(B) 2

(C) 3

(D) 6

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

(A) -1

(B) 1

(C) 2

(D) 5

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

(A) -2

(B) -4

(C) -5

(D) 1

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

(A) 1

(B) 4

(C) 5

(D) 6

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

(A) -1

(B) -2

(C) -4

(D) -5

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

(A) -1

(B) -2

(C) 0

(D) 2

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

(A) -1

(B) -2

(C) 0

(D) 2

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

(A) 2

(B) 3

(C) 4

(D) 5

10. For what values of n are (-4n - 1, 2) and (0n - 4, 2) parallel?

(A) -1

(B) -3

(C) 0

(D) 2