NSW Education Standards Authority

2022 **HIGHER SCHOOL CERTIFICATE EXAMINATION**

Mathematics Extension 1

General Instructions

* Reading time -- 7 minutes
* Working time -- 80 minutes
* Write using green 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:
47

Section I -- 7 marks

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

Section II -- 40 marks

* Attempt Questions 8-10
* Allow about 73 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.

---

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

(A) 0

(B) 2

(C) 3

(D) 4

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

(A) -1

(B) 1

(C) 2

(D) 3

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

(A) -1

(B) 0

(C) 1

(D) 3

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

(A) -2

(B) -3

(C) -4

(D) -5

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

(A) -1

(B) -2

(C) -3

(D) -4

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

(A) -1

(B) -2

(C) -3

(D) 2

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

(A) -1

(B) 2

(C) 3

(D) 5