DEPARTMENT FOR CURRICULUM,
LIFELONG LEARNING AND EMPLOYABILITY
Directorate for Learning and Assessment Programmes
Educational Assessment Unit

Track 3

Annual Examinations for Secondary Schools 2022

YEAR 9 **MATHEMATICS** **TIME: 30 minutes**
Non Calculator Paper

Name: _____ Class: _____

Question	1	2	3	4	5	6	7	8	**Total**
Mark									

Instructions to Candidates

- Answer all questions.
- All necessary working must be shown.
- This paper carries a total of 25 marks.
- Calculators and protractors are NOT ALLOWED.

1. Work out:

a) $4.28 \times 10^3 - 290$

Ans: _____

b) $10^2 + 2^4 \times 3^2$

Ans: _____

(4 marks)

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2. €1500 deposited in a bank increased to €1530 after one year. At what interest rate was the money invested?

Ans: _____

(3 marks)

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3. Estimate the value of:

$$\frac{32^2}{\sqrt{274 + 95.6}}$$

Ans: _____

(2 marks)

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4. a) Underline the inequality that has 2.5 as a possible value of x.

$-3 \leq x \leq 2$ $\quad$ $x \geq 1.5$ $\quad$ $2.5 < x \leq 9$

b) Draw the inequality underlined in question (a) on the number line.

(3 marks)

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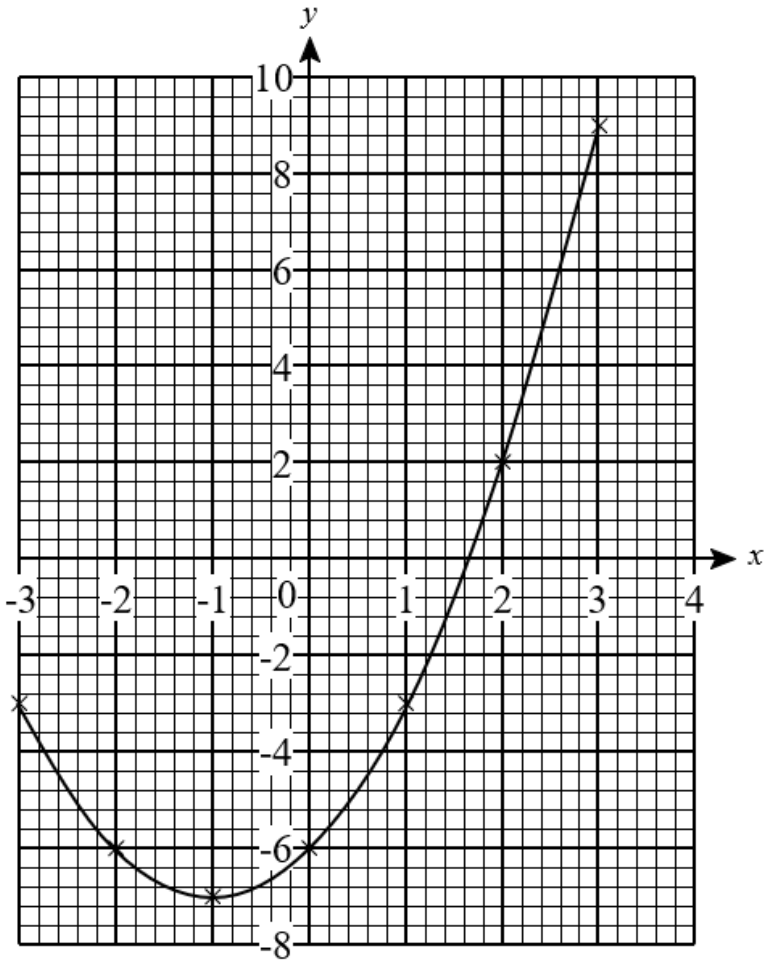
5. The diagram shows the quadratic equation $y = x^2 + 2x - 6$.



Use your graph to answer the following:

a) The minimum value of y is _____ and its corresponding value of x is _____.

b) Find the solutions to the equation $x^2 + 2x - 6 = -4$.

Ans: _____, _____

(3 marks)

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6. Find the value of:

a) $1\frac{2}{3} + 2\frac{5}{6}$

Ans: _____

b) $5\frac{1}{4} \div 3\frac{3}{8}$

Ans: _____

(4 marks)

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7. a) Expand and simplify: $(x-6)(x-8)+3x$

Ans: _____

b) i) Factorise completely: $12ax^3 - 18bx^2$

Ans: _____

ii) Hence or otherwise, simplify:

$$\frac{12ax^3 - 18bx^2}{3x}$$

Ans: _____

(4 marks)

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8. Simplify: $(2xy^2)^3 \times \frac{1}{x^5}$

Ans: _____

(2 marks)

END OF NON CALCULATOR PAPER