

GRADE 11 MATHEMATICS NOVEMBER EXAMINATION PAPER 1

QUESTION 1

1.1 Solve for in-

$$3.3.3 \cdot x^2 - 5x - 6 = 0$$

$$1.12 (2x - 3)(x + 3) = 9$$

$$1.13 \cdot x + (x-1+3)$$

$$1.14 \cdot 2^{2d} - 4^{2-d} - 12$$

1.2 Simultaneously solve ii and ir:

$$2x - y = 1$$
 and $3x^2 - 4xy + y^2 = 0$

1.3 Solve the following inequalities:

$$1.3.1 \ x^2 + 5x - 6 > 0$$

-Cit

$$1.3.2 -3(x+1)(x-2) < 0$$

pq.

QUESTION 2

REPORT.

2.1 x = -3 ± 2√2 are the roots of a quadratic function, f(x), of which the y-intercept is 4. Determine (Vx).

- 2.2 Given: $g(x) = \frac{e^{x}-\cos x}{x}$
 - 2.2.1 For which values of x will y(x) be undefined.

2.2.2 Explain why y(x) will never equal zero. (Show all your calculations).

4.1 Determine the value of x. 4.2 Draw a neat sketch of the two-graphs on the same axis. Show all intercepts

QUESTION 4

QUESTION 3

Solve s if: 2-4 < 0. Graphically represent your answer.

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2.4 Simplify and leave an answer with positive exponents only:

3.1.1 Determine the value of x.

numerical value for 7...

3.4 James and John look at the following patterns:

3.3 Given I, = 13 - 3x:

Pattern 1

 \Box

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3.1.2 Determine the numerical value of T₁.

3.2 Given the quadratic series: -129; -64; -49; -20; ...

3.2.1 Determine the next two learns of the series.

3.2.1 Determine I,, the general term of the pattern.

3.3.1 Which term in the series would be equal to -179.

3.3.2 Determine the numerical value for the 11° term.

Pattern 2

Without solving the equation, determine the nature of the roots of: $4x^2 = 2x + 1$.

3.1 The first three terms of a linear series, is given as: 3x - 2;x + 9;2x + 5.

3.2.3 Given that T_a = -4x² + Srix - 18th, determine the largest possible

Pattern 3

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John says he can derive the general formula for the number of blocks by taking the number

James says if he increases the patern number by one, square that number and then

subtract the pattern number increased by one he will get the general formula.

of columns in each pattern and multiplying if by the number of rows.

Who is correct between James and John? Prove your answer.

Given: $f(x) = \frac{-1}{-x^2} - 1$ and $g(x) = -a^x$. The point (1, -3) lies on g.

Determine the axis of simmetry of f that has a positive gradient.

with the axes and asymptote clearly.

Nmathematics Exam Papers And Memo

John Michels (Journalist)

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