

GRADE 12 INFORMAL TEST 1

PAST PAPER

DO THESE

QUESTIONS IN

YOUR BOOKS.

THESE QUESTIONS
SHOULD TAKE
ABOUT 25 MINUTES
TO DO

QUESTION 1

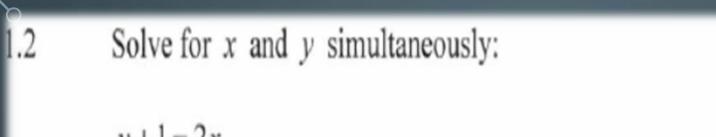
1.1 Solve for x:

$$1.1.1 x^2 - x - 20 = 0 (2$$

1.1.2
$$2x^2 - 11x + 7 = 0 \text{ (correct to TWO decimal places)}$$
 (3)

$$1.1.3 5x^2 + 4 > 21x (5)$$

$$1.1.4 2^{2x} - 6.2^x = 16 (4)$$



$$y+1=2x$$
$$x^2-xy+y^2=7$$

- .3 The roots of a quadratic equation are given by $x = \frac{-5 \pm \sqrt{20 + 8k}}{6}$, where $k \in \{-3; -2; -1; 0; 1; 2; 3\}$.
 - 1.3.1 Write down TWO values of k for which the roots will be rational.
 - 1.3.2 Write down ONE value of k for which the roots will be non-real. (1)
- 1.4 Calculate a and b if $\sqrt{\frac{7^{2014} 7^{2012}}{12}} = a(7^b)$ and a is not a multiple of 7.