

GRADE 10 MATHEMATICS MARCH TEST

QUESTION 1

1.1 Copy and complete the following table on your answer sheet:
Only tick in the applicable columns.

(4)

	$\sqrt{2}$	$\sqrt{3}$	$\sqrt{5}$	$\sqrt{7}$	$\sqrt{10}$	$\sqrt{12}$	$\sqrt{15}$
$\sqrt{3} + \sqrt{2}$							
$\sqrt{5}$							
$\sqrt{10}$							
$\sqrt{7}$							

1.2 Determine between which integers the following irrational number lie:

(2)

1.3 Use the ladder method to give the prime factors of 5104.

(2)

(2)

QUESTION 2

Factorise the following expressions:

2.1 $x^2 - 49$

(1)

2.2 $2x^2 - 12x + 10$

(2)

2.3 $4x^2 - 1$

(2)

2.4 $3x^2 + 9x - 12$

(2)

QUESTION 3

Simplify the following expressions:

3.1 $(x - 5)(3x + 2)$

(2)

3.2 $\frac{1}{x} + \frac{1}{y}$

(2)

3.3 $\frac{3x^2 + 6x}{3x}$

(2)

QUESTION 4

Simplify the following using the exponential laws.

4.1 $\frac{1}{x^3}$

(1)

4.2 x^0

(2)

Solve for x :

4.3 $2^x - 5 = 11$

(2)

QUESTION 5

Solve for x :

5.1 $(x - 3)(x + 5) = 0$

(2)

5.2 $3x + 2 = 2x - 1$

(2)

5.3 $\frac{1}{x} = \frac{1}{x+2}$

(2)

5.4 $\frac{1+2x}{x} + 5 > 8$

(2)

5.5 Solve x and y simultaneously:

$x + y = 1$

$2x - y = 3$

(2)

5.6 Jane is 3 years older than her sister. Together they are 19 years old.

(2)

(2)

QUESTION 6

6.1 Use the following triangle to determine the trigonometric ratios:



6.1.1

(2)

6.1.2

(2)

6.1.3

(2)

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