QUADRATIC FUNCTIONS AND EQUATIONS, LINEAR AND QUADRATIC INEQUALITIES - PRACTICE TEST | NEW BRUNSWICK PRE-CALCULUS 110 · UNIT E · 25 QUESTIONS

Quadratic Functions and Equations, Linear and Quadratic Inequalities — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **The quadratic with roots 1 and 4 has its vertex x coordinate equal to**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **The quadratic with roots -2 and 5 has its vertex x coordinate equal to**

ANSWER _____

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3 **The quadratic with roots 3 and 7 has its vertex x coordinate equal to**

ANSWER _____

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4 **The quadratic with roots -1 and -4 has its vertex x coordinate equal to**

ANSWER _____

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5 **The discriminant of $x^2 + 5x + 6$ is**

ANSWER _____

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6 **The discriminant of $x^2 - 5x + 6$ is**

ANSWER _____

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7 **The discriminant of $x^2 + 2x - 8$ is**

ANSWER _____

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8 **The value of $x^2 - 5x + 6$ when $x = 2$ is**

ANSWER _____

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9 **The value of $x^2 - 5x + 6$ when $x = 3$ is**

ANSWER _____

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10 **The value of $x^2 - 5x + 6$ when $x = 4$ is**

ANSWER _____

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11 **The value of $x^2 - 5x + 6$ when $x = 5$ is**

ANSWER _____

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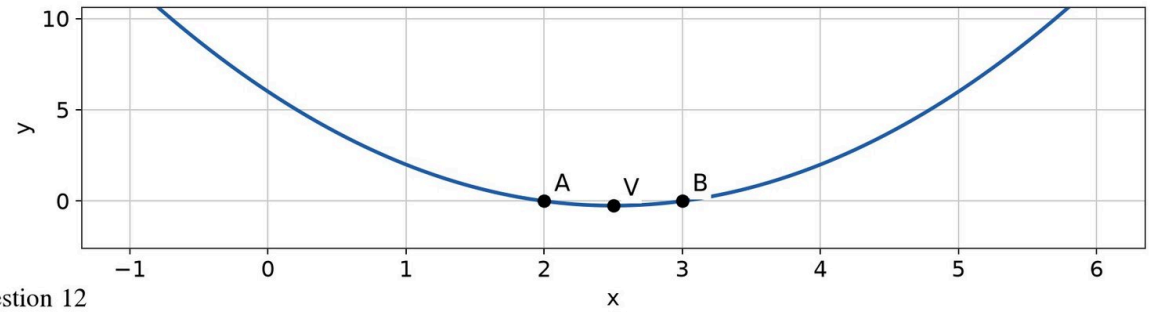
12 The graph shows y = x² - 5x + 6 . The x intercepts are labelled



Question 12

The graph shows $y = x^2 - 5x + 6$. The x intercepts are labelled

A) A and B

B) V only

C) A only

D) B only

A A and B

B V only

C A only

D B only

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13 **The solution of x^2 is less than 9 includes x =**

A 4

B -4

C 0

D 3 only

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14 **A quadratic inequality with a parabola opening upward is negative**

A outside its roots

B at its vertex only

C never

D between its roots

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15 **The quadratic formula solves equations of the form**

- **A** $a x^2 + b x + c = 0$
- **B** $a x + b = 0$
- **C** $a x^3 = 0$
- **D** $\frac{a}{x} = 0$

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16 **Completing the square for $x^2 + 6x$ gives**

- **A** $(x + 6)^2 - 36$
- **B** $(x + 3)^2 - 9$
- **C** $x^2 + 36$
- **D** $(x + 3)^2 + 9$

Understand It with Pulse | Flag a mistake

17 **A linear inequality in one variable has a solution that is a**

- A single number only
- B point only
- C range of numbers
- D circle

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18 **The larger root of $x^2 - 7x + 12 = 0$ is**

ANSWER _____

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19 **The smaller root of $x^2 - 7x + 12 = 0$ is**

ANSWER _____

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20 **The value of $x^2 - 5x + 6$ when $x = 7$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

21 **The value of $x^2 - 5x + 6$ when $x = 0$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

22 **The discriminant of $x^2 + 8x + 15$ is**

ANSWER _____

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23 **The discriminant of $x^2 -4x -12$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

24 **The smaller root of $x^2 - 9x + 20 = 0$ is**

ANSWER _____

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25 **The larger root of $x^2 - 11x + 30 = 0$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	2.5	**10.**	2	**19.**	3
2.	1.5	**11.**	6	**20.**	20
3.	5	**12.**	A	**21.**	6
4.	-2.5	**13.**	C	**22.**	4
5.	1	**14.**	D	**23.**	64
6.	1	**15.**	A	**24.**	4
7.	36	**16.**	B	**25.**	6
8.	0	**17.**	C		
9.	0	**18.**	4		

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