ONTARIO FUNCTIONS AND APPLICATIONS, GRADE 11, UNIVERSITY/COLLEGE PREPARATION (MCF3M) · UNIT A · 25 QUESTIONS

Quadratic Functions — 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 **A ball is thrown up with height $h(t) = -5t^2 + 20t$ The maximum height, in metres, is**

- **A** 25
- **B** 15
- **C** 20
- **D** 30

Understand It with Pulse | Flag a mistake

2 **A ball is thrown up with height $h(t) = -5t^2 + 20t$ The time, in seconds, to reach maximum height is**

- A 4
- B 1
- C 2
- D 3

Understand It with Pulse | Flag a mistake

3 **A company revenue model is $R(x) = -2x^2 + 40x$ where x is price in dollars. The revenue is zero when x is 0 or**

- A 10
- B 20
- C 40
- D 22

Understand It with Pulse | Flag a mistake

4 **A quadratic function has zeros at 2 and 4 Its axis of symmetry is x equal to**

- **A** 4
- **B** 2
- **C** 14
- **D** 3

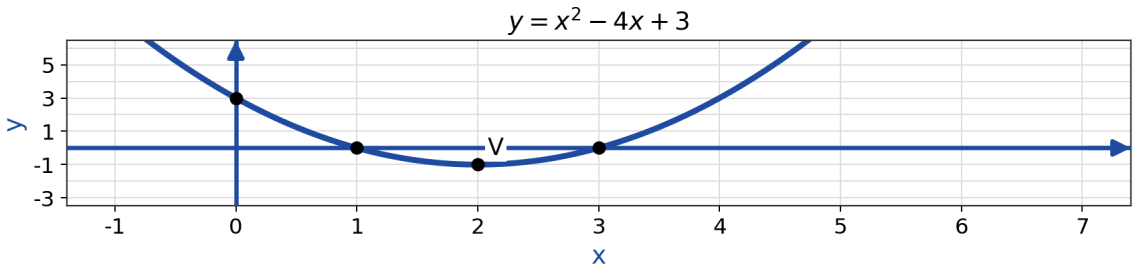
Understand It with Pulse | Flag a mistake

5 **A rectangular garden has length 6 metres more than its width, and its area is 12 m². Its width, in metres, is**

- **A** 2
- **B** 3
- **C** 4
- **D** 1

Understand It with Pulse | Flag a mistake

6 **The graph shows a parabola with vertex marked V. The coordinates of V are Figure 1**



A (-2, -1)

B (2, -1)

C (2, 1)

D (3, -1)

Understand It with Pulse | Flag a mistake

7 **The sum of the roots of $x^2 - 7x + 6 = 0$ is**

A 7

B 6

C 8

D -5

Understand It with Pulse | Flag a mistake

8 **A ball is thrown and its height follows $y = (x - 2)^2 + 3$ The vertex of this parabola is**

A (2, 3)

B (-2, 3)

C (2, -3)

D (-2, -3)

Understand It with Pulse | Flag a mistake

9 **The axis of symmetry of $y = x^2 - 14x$ is x equal to**

A 8

B 6

C 14

D 7

Understand It with Pulse | Flag a mistake

10 The y intercept of $y = x^2 - 3x + 5$ is

- A 6
- B 5
- C 2
- D 0

Understand It with Pulse | Flag a mistake

11 The zeros of $y = (x - 2)(x + 3)$ are

- A $x = 2, x = -3$
- B $x = -2, x = 3$
- C $x = 2, x = 3$
- D $x = -2, x = -3$

Understand It with Pulse | Flag a mistake

12 **A ball is thrown up with height $h(t) = -5t^2 + 30t$ The maximum height, in metres, is**

- A 50
- B 40
- C 55
- D 45

Understand It with Pulse | Flag a mistake

13 **A ball is thrown up with height $h(t) = -5t^2 + 30t$ The time, in seconds, to reach maximum height is**

- A 6
- B 1.5
- C 4
- D 3

Understand It with Pulse | Flag a mistake

14 **A company revenue model is $R(x) = -2x^2 + 60x$ where x is price in dollars. The revenue is zero when x is 0 or**

- A 15
- B 60
- C 32
- D 30

Understand It with Pulse | Flag a mistake

15 **A quadratic function has zeros at 2 and 6 Its axis of symmetry is x equal to**

- A 5
- B 4
- C 3
- D 15

Understand It with Pulse | Flag a mistake

16 **A rectangular garden has length 7 metres more than its width, and its area is 21 m². Its width, in metres, is**

A 4

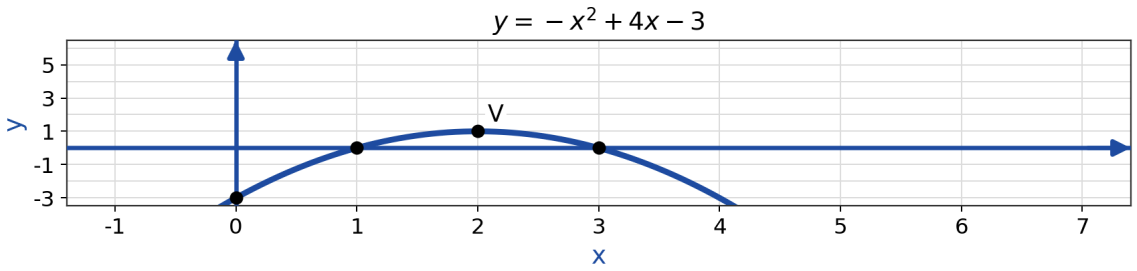
B 3

C 5

D 2

Understand It with Pulse | Flag a mistake

17 **The graph shows a parabola with vertex marked V. The coordinates of V are Figure 2**



A (-2, 1)

B (2, 1)

C (2, -1)

D (3, 1)

Understand It with Pulse | Flag a mistake

18 **The sum of the roots of $x^2 - 7x + 10 = 0$ is**

A 10

B 8

C -3

D 7

Understand It with Pulse | Flag a mistake

19 **A ball is thrown up with height $h(t) = -5t^2 + 40t$ The maximum height, in metres, is**

- A 80
- B 85
- C 75
- D 90

Understand It with Pulse | Flag a mistake

20 **A ball is thrown up with height $h(t) = -5t^2 + 40t$ The time, in seconds, to reach maximum height is**

- A 4
- B 8
- C 2
- D 5

Understand It with Pulse | Flag a mistake

21 **A company revenue model is $R(x) = -2x^2 + 80x$ where x is price in dollars. The revenue is zero when x is 0 or**

- A 20
- B 40
- C 80
- D 42

Understand It with Pulse | Flag a mistake

22 **A quadratic function has zeros at 2 and 8 Its axis of symmetry is x equal to**

- A 6
- B 4
- C 16
- D 5

Understand It with Pulse | Flag a mistake

23 **A rectangular garden has length 8 metres more than its width, and its area is 32 m². Its width, in metres, is**

A 4

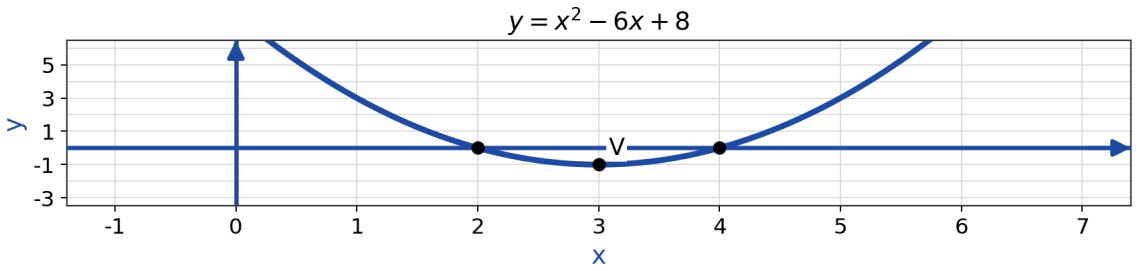
B 5

C 6

D 3

Understand It with Pulse | Flag a mistake

24 **The graph shows a parabola with vertex marked V. The coordinates of V are Figure 3**



A (-3, -1)

B (3, -1)

C (3, 1)

D (4, -1)

Understand It with Pulse | Flag a mistake

25 **The sum of the roots of $x^2 - 7x + 12 = 0$ is**

A 12

B 7

C 8

D -1

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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