PRINCE EDWARD ISLAND FOUNDATIONS OF MATHEMATICS 11 · UNIT E

Quadratic Functions and Proportional Reasoning — Practice Test

Prince Edward Island Foundations of Mathematics 11 • 25 questions

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 **For the quadratic function y = (x - 1)(x - 5) what is the smaller root**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **For the quadratic function y = (x - 2)(x - 3) what is the x coordinate of the vertex**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **y varies directly with x , and y = 12 when x = 4 . What is the constant of variation**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **y varies inversely with x , with constant 12 . What is y when x = 3**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **For y = 2x , the constant of variation is**

A 1

B 0

C 2

D 4

Understand It with Pulse | Flag a mistake

6 **If a quadratic has no real roots, its discriminant is**

A negative

B positive

C zero

D undefined

Understand It with Pulse | Flag a mistake

7 **If a quadratic has one repeated real root, its discriminant is**

A positive

B negative

C undefined

D zero

Understand It with Pulse | Flag a mistake

8 **If a quadratic has two different real roots, its discriminant is**

- A negative
- B zero
- C positive
- D undefined

Understand It with Pulse | Flag a mistake

9 **If $y = \frac{12}{x}$, then y varies**

- A directly with x
- B linearly with x^2
- C not at all
- D inversely with x

Understand It with Pulse | Flag a mistake

10 **In direct variation, as x doubles, y**

A halves

B stays the same

C doubles

D becomes zero

Understand It with Pulse | Flag a mistake

11 **In inverse variation, as x doubles, y**

A doubles

B stays the same

C becomes zero

D halves

Understand It with Pulse | Flag a mistake

12 **Proportional reasoning compares quantities by their**

A ratio

B difference

C sum

D product only

Understand It with Pulse | Flag a mistake

13 **The axis of symmetry of a parabola passes through the**

A origin only

B y intercept

C vertex

D largest root

Understand It with Pulse | Flag a mistake

14 **The discriminant of a quadratic tells how many**

A vertices it has

B real roots it has

C intercepts on the y axis

D turning points

Understand It with Pulse | Flag a mistake

15 **The graph of a quadratic function is called a**

A parabola

B line

C circle

D hyperbola

Understand It with Pulse | Flag a mistake

16 **The roots of a quadratic function are the x values where the graph**

- **A** crosses the y axis
- **B** crosses the x axis
- **C** reaches its vertex
- **D** is steepest

Understand It with Pulse | Flag a mistake

17 **The standard form of a quadratic function is**

- **A** $y = mx + b$
- **B** $y = ax^2 + bx + c$
- **C** $y = a(x - h)^2 + k$ only
- **D** $y = \frac{a}{x}$

Understand It with Pulse | Flag a mistake

18 **The vertex form of a quadratic shows the vertex**

A only after factoring

B only after graphing

C directly

D never

Understand It with Pulse | Flag a mistake

19 **The vertex of a parabola is its**

A x intercept only

B highest or lowest point

C y intercept only

D midpoint of the axes

Understand It with Pulse | Flag a mistake

20 **For the quadratic function y = (x - 2)(x - 6) what is the smaller root**

ANSWER _____

Understand It with Pulse | Flag a mistake

21 **For the quadratic function y = (x - 1)(x - 4) what is the x coordinate of the vertex**

ANSWER _____

Understand It with Pulse | Flag a mistake

22 **y varies directly with x , and y = 14 when x = 7 . What is the constant of variation**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **y varies inversely with x , with constant 20 . What is y when x = 4**

ANSWER _____

Understand It with Pulse | Flag a mistake

24 **For the quadratic function y = (x - 3)(x - 7) what is the smaller root**

ANSWER

Understand It with Pulse | Flag a mistake

25 **For the quadratic function y = (x - 3)(x - 1) what is the x coordinate of the vertex**

ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	1	**10.**	C	**19.**	B
2.	2.50	**11.**	D	**20.**	2
3.	3	**12.**	A	**21.**	2.50
4.	4.00	**13.**	C	**22.**	2
5.	C	**14.**	B	**23.**	5.00
6.	A	**15.**	A	**24.**	3
7.	D	**16.**	B	**25.**	2.00
8.	C	**17.**	B		
9.	D	**18.**	C		

© 2026 Brett Robbins. All Rights Reserved.