Zeros & Multiplicity · 1

List the zeros of $f(x) = (x + 5)^3(x - 1)^2(x - 4)$ in increasing order, separated by commas.

Zeros & Multiplicity · 2

What is the multiplicity of the zero $x = -3$ of $f(x) = -3(x + 5)(x + 3)^2(x + 1)^3$?

Zeros & Multiplicity · 3

At $x = -5$, does the graph of $f(x) = x^2(x + 5)^3(x - 5)$ cross or touch the x-axis? Write cross or touch.

Zeros & Multiplicity · 4

What is the degree of $f(x) = -3(x + 7)^2(x + 3)^3(x - 6)^4$?

Zeros & Multiplicity · 5

At $x = 2$, does the graph of $f(x) = 2(x + 4)^2(x + 3)^2(x - 2)$ cross or touch the x-axis? Write cross or touch.

Zeros & Multiplicity · 6

List the zeros of $f(x) = 2(x + 4)^3(x + 2)^3(x - 5)^2$ in increasing order, separated by commas.

Zeros & Multiplicity · 7

List the zeros of $f(x) = (x - 1)^2(x - 5)(x - 8)^2$ in increasing order, separated by commas.

Zeros & Multiplicity · 8

At $x = 0$, does the graph of $f(x) = -x^3(x - 4)^2(x - 7)$ cross or touch the x-axis? Write cross or touch.

Zeros & Multiplicity · 2

ANSWER

2

Zeros & Multiplicity · 1

ANSWER

-5, 1, 4

Zeros & Multiplicity · 4

ANSWER

9

Zeros & Multiplicity · 3

ANSWER

cross

Zeros & Multiplicity · 6

ANSWER

-4, -2, 5

Zeros & Multiplicity · 5

ANSWER

cross

Zeros & Multiplicity · 8

ANSWER

cross

Zeros & Multiplicity · 7

ANSWER

1, 5, 8

Zeros & Multiplicity · 9

What is the multiplicity of the zero $x = 4$ of $f(x) = (x + 3)(x - 4)^4(x - 5)^4$?

Zeros & Multiplicity · 10

What is the degree of $f(x) = x^2(x + 4)^4(x - 7)$?

Zeros & Multiplicity · 11

At $x = 4$, does the graph of $f(x) = (x - 1)^2(x - 4)^3(x - 6)^4$ cross or touch the x-axis? Write cross or touch.

Zeros & Multiplicity · 12

List the zeros of $f(x) = 2(x + 4)(x + 2)(x - 7)$ in increasing order, separated by commas.

Zeros & Multiplicity · 13

List the zeros of $f(x) = (x + 7)^2(x - 1)^2(x - 8)^4$ in increasing order, separated by commas.

Zeros & Multiplicity · 14

At $x = -7$, does the graph of $f(x) = (x + 7)^4(x - 4)(x - 9)$ cross or touch the x-axis? Write cross or touch.

Zeros & Multiplicity · 15

What is the multiplicity of the zero $x = 0$ of $f(x) = x^4(x + 7)^4(x - 7)^3$?

Zeros & Multiplicity · 16

What is the degree of $f(x) = (x - 1)(x - 4)^3(x - 7)^4$?

Zeros & Multiplicity · 10

ANSWER

7

Zeros & Multiplicity · 9

ANSWER

4

Zeros & Multiplicity · 12

ANSWER

-4, -2, 7

Zeros & Multiplicity · 11

ANSWER

cross

Zeros & Multiplicity · 14

ANSWER

touch

Zeros & Multiplicity · 13

ANSWER

-7, 1, 8

Zeros & Multiplicity · 16

ANSWER

8

Zeros & Multiplicity · 15

ANSWER

4

Zeros & Multiplicity · 17

At x = 2, does the graph of f(x) = -(x + 7)(x + 5)(x - 2)² cross or touch the x-axis? Write cross or touch.

Zeros & Multiplicity · 18

List the zeros of f(x) = 2(x + 9)³(x + 4)(x - 6)² in increasing order, separated by commas.

Zeros & Multiplicity · 19

List the zeros of f(x) = x²(x + 2)⁴(x - 1) in increasing order, separated by commas.

Zeros & Multiplicity · 20

What is the multiplicity of the zero x = 7 of f(x) = -(x + 5)⁴(x - 3)³(x - 7)³?

Zeros & Multiplicity · 21

At x = -6, does the graph of f(x) = (x + 6)³(x - 2)³(x - 5)⁴ cross or touch the x-axis? Write cross or touch.

Zeros & Multiplicity · 22

What is the degree of f(x) = (x + 6)³(x + 3)³(x - 7)⁴?

Zeros & Multiplicity · 23

At x = -2, does the graph of f(x) = -(x + 2)⁴(x - 4)³(x - 7) cross or touch the x-axis? Write cross or touch.

Zeros & Multiplicity · 24

List the zeros of f(x) = -x³(x + 7)⁴(x + 4)⁴ in increasing order, separated by commas.

Zeros & Multiplicity · 18

ANSWER

-9, -4, 6

Zeros & Multiplicity · 17

ANSWER

touch

Zeros & Multiplicity · 20

ANSWER

3

Zeros & Multiplicity · 19

ANSWER

-2, 0, 1

Zeros & Multiplicity · 22

ANSWER

10

Zeros & Multiplicity · 21

ANSWER

cross

Zeros & Multiplicity · 24

ANSWER

-7, -4, 0

Zeros & Multiplicity · 23

ANSWER

touch