Zeros & Multiplicity · 1

List the zeros of $f(x) = (x + 9)^3(x + 5)^4(x - 4)^2$ in increasing order, separated by commas.

Zeros & Multiplicity · 2

At $x = 1$, does the graph of $f(x) = 2(x + 8)^4(x + 2)^2(x - 1)^2$ cross or touch the x-axis? Write cross or touch.

Zeros & Multiplicity · 3

What is the multiplicity of the zero $x = 0$ of $f(x) = -3x^4(x + 7)^4(x + 5)^4$?

Zeros & Multiplicity · 4

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

Zeros & Multiplicity · 5

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

Zeros & Multiplicity · 6

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

Zeros & Multiplicity · 7

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

Zeros & Multiplicity · 8

At $x = 5$, does the graph of $f(x) = x^2(x + 1)^3(x - 5)$ cross or touch the x-axis? Write cross or touch.

Zeros & Multiplicity · 2

ANSWER

touch

Zeros & Multiplicity · 1

ANSWER

-9, -5, 4

Zeros & Multiplicity · 4

ANSWER

4

Zeros & Multiplicity · 3

ANSWER

4

Zeros & Multiplicity · 6

ANSWER

2, 7, 8

Zeros & Multiplicity · 5

ANSWER

cross

Zeros & Multiplicity · 8

ANSWER

cross

Zeros & Multiplicity · 7

ANSWER

-1, 2, 4

Zeros & Multiplicity · 9

What is the multiplicity of the zero $x = -1$ of $f(x) = x^4(x + 4)^4(x + 1)$?

Zeros & Multiplicity · 10

What is the degree of $f(x) = 2(x + 6)^3(x - 8)^4(x - 9)^3$?

Zeros & Multiplicity · 11

At $x = 5$, does the graph of $f(x) = -3(x - 2)(x - 5)(x - 7)^4$ cross or touch the x-axis? Write cross or touch.

Zeros & Multiplicity · 12

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

Zeros & Multiplicity · 13

List the zeros of $f(x) = (x + 3)^4(x - 2)^2(x - 8)^4$ in increasing order, separated by commas.

Zeros & Multiplicity · 14

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

Zeros & Multiplicity · 15

What is the multiplicity of the zero $x = -8$ of $f(x) = x^2(x + 8)^2(x - 7)^4$?

Zeros & Multiplicity · 16

What is the degree of $f(x) = (x + 3)^2(x + 2)^2(x - 9)^4$?

Zeros & Multiplicity · 10

ANSWER

10

Zeros & Multiplicity · 9

ANSWER

1

Zeros & Multiplicity · 12

ANSWER

-4, 3, 6

Zeros & Multiplicity · 11

ANSWER

cross

Zeros & Multiplicity · 14

ANSWER

touch

Zeros & Multiplicity · 13

ANSWER

-3, 2, 8

Zeros & Multiplicity · 16

ANSWER

8

Zeros & Multiplicity · 15

ANSWER

2

Zeros & Multiplicity · 17

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

Zeros & Multiplicity · 18

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

Zeros & Multiplicity · 19

List the zeros of f(x) = -(x + 7)^4(x + 6)^2(x - 6)^3 in increasing order, separated by commas.

Zeros & Multiplicity · 20

At x = -9, does the graph of f(x) = (x + 9)^4(x + 7)^2(x - 8)^4 cross or touch the x-axis? Write cross or touch.

Zeros & Multiplicity · 21

What is the multiplicity of the zero x = -8 of f(x) = -(x + 8)(x - 3)^4(x - 8)^2?

Zeros & Multiplicity · 22

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

Zeros & Multiplicity · 23

At x = -6, does the graph of f(x) = (x + 9)(x + 8)(x + 6)^4 cross or touch the x-axis? Write cross or touch.

Zeros & Multiplicity · 24

List the zeros of f(x) = (x + 9)^4(x + 7)^4(x + 3)^4 in increasing order, separated by commas.

Zeros & Multiplicity · 18

ANSWER

-8, -7, 0

Zeros & Multiplicity · 17

ANSWER

cross

Zeros & Multiplicity · 20

ANSWER

touch

Zeros & Multiplicity · 19

ANSWER

-7, -6, 6

Zeros & Multiplicity · 22

ANSWER

7

Zeros & Multiplicity · 21

ANSWER

1

Zeros & Multiplicity · 24

ANSWER

-9, -7, -3

Zeros & Multiplicity · 23

ANSWER

touch