Zeros & Multiplicity · 1

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

Zeros & Multiplicity · 2

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

Zeros & Multiplicity · 3

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

Zeros & Multiplicity · 4

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

Zeros & Multiplicity · 5

What is the multiplicity of the zero $x = 4$ of $f(x) = 2(x - 1)^3(x - 3)(x - 4)^3$?

Zeros & Multiplicity · 6

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

Zeros & Multiplicity · 7

What is the degree of $f(x) = -3(x + 1)^2(x - 4)$?

Zeros & Multiplicity · 8

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

Zeros & Multiplicity · 2

ANSWER

3

Zeros & Multiplicity · 1

ANSWER

-4, -3

Zeros & Multiplicity · 4

ANSWER

-4, 1, 4

Zeros & Multiplicity · 3

ANSWER

cross

Zeros & Multiplicity · 6

ANSWER

touch

Zeros & Multiplicity · 5

ANSWER

3

Zeros & Multiplicity · 8

ANSWER

2

Zeros & Multiplicity · 7

ANSWER

3

Zeros & Multiplicity · 9

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

Zeros & Multiplicity · 10

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

Zeros & Multiplicity · 11

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

Zeros & Multiplicity · 12

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

Zeros & Multiplicity · 13

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

Zeros & Multiplicity · 14

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

Zeros & Multiplicity · 15

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

Zeros & Multiplicity · 16

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

Zeros & Multiplicity · 10

ANSWER

2

Zeros & Multiplicity · 9

ANSWER

-3, -2, 0

Zeros & Multiplicity · 12

ANSWER

-5, -4, 2

Zeros & Multiplicity · 11

ANSWER

cross

Zeros & Multiplicity · 14

ANSWER

cross

Zeros & Multiplicity · 13

ANSWER

3

Zeros & Multiplicity · 16

ANSWER

1

Zeros & Multiplicity · 15

ANSWER

5

Zeros & Multiplicity · 17

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

Zeros & Multiplicity · 18

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

Zeros & Multiplicity · 19

At $x = 1$, does the graph of $f(x) = 2(x + 6)^2(x - 1)^3(x - 5)$ cross or touch the x-axis? Write cross or touch.

Zeros & Multiplicity · 20

What is the degree of $f(x) = (x + 6)^4(x + 2)^2(x + 1)$?

Zeros & Multiplicity · 21

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

Zeros & Multiplicity · 22

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

Zeros & Multiplicity · 23

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

Zeros & Multiplicity · 24

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

Zeros & Multiplicity · 18

ANSWER

1

Zeros & Multiplicity · 17

ANSWER

-4, -1, 0

Zeros & Multiplicity · 20

ANSWER

7

Zeros & Multiplicity · 19

ANSWER

cross

Zeros & Multiplicity · 22

ANSWER

-6, -4, 4

Zeros & Multiplicity · 21

ANSWER

cross

Zeros & Multiplicity · 24

ANSWER

2

Zeros & Multiplicity · 23

ANSWER

-3, -1, 1