Task card 1 Zeros & Multiplicity

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

Task card 2 Zeros & Multiplicity

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

Task card 3 Zeros & Multiplicity

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.

Task card 4 Zeros & Multiplicity

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

Task card 5 Zeros & Multiplicity

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.

Task card 6 Zeros & Multiplicity

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

Task card 7 Zeros & Multiplicity

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

Task card 8 Zeros & Multiplicity

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.

Task card 9 Zeros & Multiplicity

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

Task card 10 Zeros & Multiplicity

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

Task card 11 Zeros & Multiplicity

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.

Task card 12 Zeros & Multiplicity

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

Task card 13 Zeros & Multiplicity

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

Task card 14 Zeros & Multiplicity

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.

Task card 15 Zeros & Multiplicity

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

Task card 16 Zeros & Multiplicity

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

Task card 17 Zeros & Multiplicity

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.

Task card 18 Zeros & Multiplicity

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

Task card 19 Zeros & Multiplicity

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

Task card 20 Zeros & Multiplicity

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

Task card 21 Zeros & Multiplicity

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.

Task card 22 Zeros & Multiplicity

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

Task card 23 Zeros & Multiplicity

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.

Task card 24 Zeros & Multiplicity

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

Zeros & Multiplicity Task Cards

Recording sheet · Grade 11 · Answer each question about the polynomial function.

Name: _____ Date: _____

Scan to check your answers

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24

Zeros & Multiplicity Task Cards: Answer Key

Grade 11 · Medium

The answers online

1. -5, 1, 4	**2.** 2	**3.** cross
4. 9	**5.** cross	**6.** -4, -2, 5
7. 1, 5, 8	**8.** cross	**9.** 4
10. 7	**11.** cross	**12.** -4, -2, 7
13. -7, 1, 8	**14.** touch	**15.** 4
16. 8	**17.** touch	**18.** -9, -4, 6
19. -2, 0, 1	**20.** 3	**21.** cross
22. 10	**23.** touch	**24.** -7, -4, 0