

**Determine zeros from factored form****1**

Factored Form

A $y = a(x - R_1)(x - R_2)$

B $y = ax^2 + bx + c$

C $y = a(x - h)^2 + k$

2

What form is this quadratic equation in?

$$y = 2(x + 4)(x + 4)$$

A Vertex Form

B Factored Form

C Standard Form

3

Which sign chart correctly shows the sign of this polynomial on each interval?

$$(x + 4)^4(x + 2)^3$$

A

Interval	Sign
$(-\infty, -4)$	+
$(-4, -2)$	-
$(-2, \infty)$	+

B

Interval	Sign
$(-\infty, -2)$	-
$(-2, \infty)$	+

4

Which set of values satisfies this inequality?

$$(x + 1)^2(x - 2)(x - 4)^3 < 0$$

A $(-\infty, 2) \cup (4, \infty)$

B $(2, 4)$

C $(-\infty, -1) \cup (2, 4)$

D $(-\infty, 2) \cup (2, 4) \cup (4, \infty)$

5

Is this statement true or false?

$$f(x) = x^3(x - 1)^2$$

At $x = 1$ the graph touches the x -axis without crossing.A
TrueB
False

**Determine zeros from factored form****6**

What are the roots and multiplicities of this function?

$$f(x) = x(x - 3)$$

A

 $x = 0$ (multiplicity 1)
 $x = 3$ (multiplicity 1)

B

 $x = -3$ (multiplicity 1)
 $x = 0$ (multiplicity 1)

C

 $x = 1$ (multiplicity 1)
 $x = 3$ (multiplicity 1)

D

 $x = 0$ (multiplicity 2)
 $x = 3$ (multiplicity 1)

E

 $x = 0$ (multiplicity 1)
 $x = 3$ (multiplicity 2)**7**

Which graph shows the x-intercept behaviour of this function?

$$f(x) = (x + 3)^4(x + 1)^2$$

A



B



C



D

**8**

Which set of values satisfies this inequality?

$$(x + 4)^3(x + 2)^2(x - 1)^4 < 0$$

A

$$(-\infty, -4) \cup (-4, \infty)$$

B

$$(-4, -2)$$

C

$$(-4, \infty)$$

D

$$(-\infty, -4)$$

9

Is this statement true or false?

$$f(x) = (x + 2)(x + 1)$$

At $x = -1$ the graph crosses the x-axis.

A

True

B

False

10

Which graph shows the x-intercept behaviour of this function?

$$f(x) = (x - 2)^2(x - 3)^4$$

A



B



C



D

