



Function Root Behaviour (Polynomials) - Intercept Behaviour to Function and Intercept

1 Which function and intercept would show this x-intercept behaviour?
touches the x-axis without crossing and flattens

A
 $f(x) = (x + 3)^4(x - 1)^4$
at $x = -3$

B
 $f(x) = (x + 3)^4(x - 1)^4$
at $x = 1$

2 Which function and intercept would show this x-intercept behaviour?
crosses the x-axis

A
 $f(x) = (x + 1)^4(x - 1)$
at $x = 1$

B
 $f(x) = (x + 1)^4(x - 1)$
at $x = -1$

3 Which function and intercept would show this x-intercept behaviour?
touches the x-axis without crossing

A
 $f(x) = (x + 3)(x + 1)^2$
at $x = -1$

B
 $f(x) = (x + 3)(x + 1)^2$
at $x = -3$

4 Which function and intercept would show this x-intercept behaviour?
crosses the x-axis and flattens

A
 $f(x) = (x + 1)^3(x - 3)$
at $x = 3$

B
 $f(x) = (x + 1)^3(x - 3)$
at $x = -1$