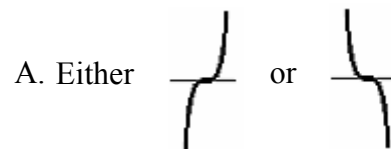


The Short Run (Local) Behavior of Polynomial and Rational Functions

1. Which best describes the shape of $y = (x-a)^2(x-b)(x-c)^3$ near $x = a$?

Choice ____.

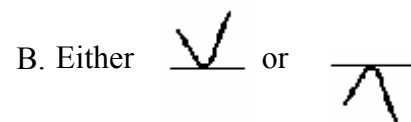
Reason:



2. Which best describes the shape of $y = (x-a)^2(x-b)(x-c)^3$ near $x = b$?

Choice ____.

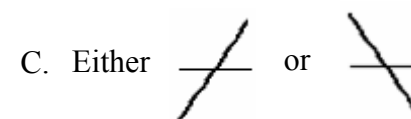
Reason:



3. Which best describes the shape of $y = (x-a)^2(x-b)(x-c)^3$ near $x = c$?

Choice ____.

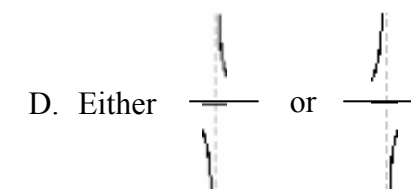
Reason:



4. Which best describes the shape of $y = \frac{(x-a)^2(x-c)^3}{(x-b)^3(x-d)^4}$ near $x = a$?

Choice ____.

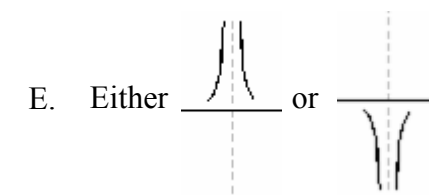
Reason:



5. Which best describes the shape of $y = \frac{(x-a)^2(x-c)^3}{(x-b)^3(x-d)^4}$ near $x = b$?

Choice ____.

Reason:



6. Which best describes the shape of $y = \frac{(x-a)^2(x-c)^3}{(x-b)^3(x-d)^4}$ near $x = c$?

Choice ____.

Reason:

7. Which best describes the shape of $y = k \frac{(x-a)^2(x-c)^3}{(x-b)^3(x-d)^4}$ near $x = d$?

Choice ____.

Reason: