

Name: ANSWER KEY

Score: _____

For the rational function $r(x) = \frac{(x-1)^2(x+2)}{(x+1)(x-2)^2}$

- a. (6) List the zeroes of r and their multiplicities.
 b. (6) List the vertical asymptotes of r and their multiplicities.

Zero	Mult.	VA	Mult.
1	2	-1	1
-2	1	2	2

- c. (2) Approximate r by a power function.

$$r(x) \approx \frac{x^2 \cdot x}{x \cdot x^2} = 1$$

- d. (2) Determine any horizontal asymptote, if any.

$$y = 1$$

- e. (9) Sketch a schematic graph of r .

