

IB Math 1  
Graphing Rational Functions

Name: CLASS COPY  
Period: \_\_\_\_\_

Without a calculator, sketch a complete graph of each function including the vertical and horizontal asymptotes, holes,  $x$ -intercepts,  $y$ -intercept and end behaviour.

$$1. \ f(x) = \frac{x-1}{x+4}$$

$$2. \ f(x) = \frac{x}{x^2 + 2x}$$

$$3. \ f(x) = \frac{2x^2 - 5x - 3}{x^2 - 2x - 3}$$

$$4. \ f(x) = \frac{2x^2 - 6x + 4}{x^3 - 2x^2 - x + 2}$$

$$5. \ f(x) = \frac{2x^3 + 3x^2 - 9x - 10}{3x^3 - 11x^2 - 19x - 5}$$

$$6. \ f(x) = \frac{4x^2 - 9}{8x^3 + 12x^2 - 18x - 27}$$

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