Chapter 5 Test – Rational Functions

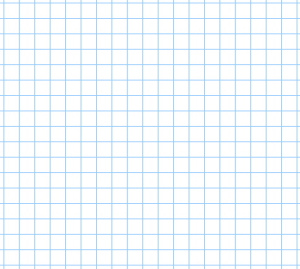
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| --- | --- | --- | --- | --- | --- | --- |
|  | R- | R+ | 1 | 2 | 3 | 4 |
| Identify and describe some key features of the graphs of rational functions, and represent rational functions graphically; |  |  |  |  |  |  |
| Solve problems involving polynomial and simple rational equations graphically and algebraically; |  |  |  |  |  |  |
| Demonstrate an understanding of solving polynomial and simple rational inequalities. |  |  |  |  |  |  |
| Demonstrate an understanding of average and instantaneous rate of change, and determine, numerically and graphically, and interpret the average rate of change of a function over a given interval and the instantaneous rate of change of a function at a given point; |  |  |  |  |  |  |

In all questions, f(x) is LEVEL 2, g(x) is LEVEL 3 and h(x) is LEVEL 4.

When graphing, always label the **asymptotes** and the **intercepts**.

1.

1. Graph f(x), g(x) OR h(x).



1. State the equations of the vertical and horizontal asymptotes.
2. State the domain and range.
3. State the intercepts.
4. State the positive intervals.
5. State the negative intervals.
6. State the intervals of increase.
7. State the intervals of decrease.